Saskatchewan
Health

# A Health Profile of Saskatchewan Seniors 1992-2005

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# ACKNOWLEDGEMENTS

*A Health Profile of Saskatchewan Seniors* has been prepared by:

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We gratefully acknowledge our colleagues who contributed their time and expertise in preparation and review of this report:

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Suggested citation: *A Health Profile of Saskatchewan Seniors*, Population Health Branch/ Community Care Branch, Saskatchewan Health, Canada, 2006.

This publication is available online at www.health.gov.sk.ca/mc_publications.html

ISBN: 1-55157-051-3

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# FOREWORD

The first of its kind in Saskatchewan, *A Health Profile of Saskatchewan Seniors* provides the latest available information about the health of older Saskatchewan residents and their use of health care services. The report provides statistical information for government and health regions to use in planning and setting priorities within the health care system. At the same time, the publication will be of interest to anyone wanting to learn more about the health of Saskatchewan seniors. This includes seniors, health regions, seniors' organizations and clubs, educators, researchers and planners.

The report also provides evidence to support the work of the Provincial Advisory Committee of Older Persons and its recommendations put forward in the *Provincial Policy Framework and Action Plan for Older Persons*, released in 2003. The Committee was formed in June 2000 in direct response to the final report of the Provincial Advisory Committee for the International Year of Older Persons 1999. The committee was appointed to advise the Minister Responsible for Seniors and is comprised of individuals familiar with the concerns of seniors.

The data are drawn from a variety of sources, including Saskatchewan Health's Covered Population, Canadian Community Health Survey (CCHS), and various administrative databases. In most instances, the study analyzes information from 1992 to 2003.

The following 11 topics are covered in the report: population characteristics, health determinants, health status, hospitalizations, injuries, physician visits, chiropractic visits, prescription drugs, community-based services, deaths, and health care costs. The *Highlights* section provides an overview of the key findings in the report.

For the purpose of this report, a senior is defined as anyone aged 65 years or older.

## Snapshot Picture

Saskatchewan is fortunate to have the highest percentage of seniors in Canada – one in every seven people, or 14.8 per cent, is over age 65. As the baby boomers enter their older years, this percentage will continue to increase.

Where seniors live varies greatly across the health regions. For instance, Sunrise Health Region, situated in east-central Saskatchewan, had the highest percentage of seniors (22%), while the Athabasca Health Authority, located in northern Saskatchewan, had the lowest percentage (3.5%).

Seniors, especially those aged 65 to 74 years, are a fairly healthy lot. If you ask them if they are healthy, most will respond affirmatively.

Over the past two decades, seniors' levels of income and education have improved, both considered key factors in determining good health. Seniors are also likely to make healthy lifestyle choices, such as quitting smoking, abstaining from alcohol, participating in physical activity, and eating fruits and vegetables.

Nearly half of every health care dollar is devoted to seniors' health care services, not surprising considering that we tend to experience more chronic or acute conditions as we age.

Due to their advancing age, seniors account for more than 80 per cent of all deaths in the province, and one in three seniors will have been hospitalized within the past year. Cardiovascular disease and cancer are the leading causes of death for Saskatchewan seniors.

## Population Characteristics

- The number of seniors in Saskatchewan was 147,630, or 14.8 per cent of the population in 2004. This means Saskatchewan has the highest percentage of seniors in Canada, followed by Nova Scotia and Prince Edward Island. The national average is 13 per cent.
- Sunrise Health Region had the highest percentage of seniors (22%), followed by Heartland Health Region (18.4%). In contrast, the regions with the lowest percentages of seniors are the Athabasca Health Authority (3.5%) and the Mamawetan Churchill River Health Region (4.6 %).
- Half of Saskatchewan seniors are aged 65 to 74 years; one-third are aged 75 to 84 years and one-sixth are aged 85 years and older.
- In all health regions, except Keewatin Yatthé Health Region and the Athabasca Health Authority, the proportion of female seniors was higher than males.
- The life expectancy of Saskatchewan residents has increased steadily. A male born in 2001 can expect to live to 76.3 years and a female to 82.2 years. In contrast, a male born in 1980 could expect to live to 72.5 years and a female to 79.9 years.

## Health Determinants

*Health determinants* can be defined as those non-medical factors or conditions that influence a person's health. Two of the factors associated with better health, higher levels of income and education, are profiled in this report.

**Income** – Seniors tend to have lower incomes than their younger counterparts.

- In 2002 the average income for male seniors was $26,800 and $19,600 for female seniors. Men's average income has remained consistent from 1980 to 2002 while women's income showed a rising tendency during this same period.
- In 2002, the percentage of average total income that came from Old Age Security, Guaranteed Income Supplement and Spouse's Allowance was 22 per cent for male seniors and 34 per cent for female seniors.

**Education** – In 2004, the highest level of education attained by the majority of seniors in Saskatchewan was some or all of high school (37.5%) while 33.9 per cent of seniors had completed some or all of post-secondary education. The lowest percentage of seniors had 0 to 8 years of education, which ranked the highest from 1990 to 1998. The crossing over of education levels between 0 to 8 years of study and some or completed high school occurred in 2000.

## Health Status

- The majority of Saskatchewan seniors consider themselves healthy: Seventy-one per cent of seniors reported their health as excellent, very good or good. This positive self-rated health status was highest at 76.8 per cent among seniors aged 65 to 74 years. Seniors aged 75 to 84 years reported a lower status at 64.2 per cent, and those 85 years and older reported the lowest at 59.2 per cent.
- Female seniors reported a higher percentage of chronic conditions compared to male seniors. Heading the list of conditions are arthritis or rheumatism (55.3% for women and 42.4% for men), high blood pressure (48.1% for women and 33.6% for men), and asthma (7.6% for women and 5.77% for men).
- As for mental health conditions, 4.8 per cent of seniors reported a mood disorder, including depression, bipolar disorder, mania or dysthymia (chronic depression), while 1.96 per cent reported having Alzheimer's disease or other dementia.

## Healthy Living Behaviour

**Alcohol Consumption** – Among current drinkers, 25.2% of male seniors and 12.7% of female seniors consume one alcoholic drink per day, while 66.9% of male seniors and 85.9% of female seniors reported no daily consumption of alcohol.

**Smoking** – Male seniors (11.6%) are more likely than female seniors (9.3%) to smoke daily or occasionally. Almost half (48.4%) of women and 17% of men have never smoked, and 70.6% of men and 41.1% of women have quit smoking.

**Physical Activity** – More than half of all seniors participated in physical activity sometimes or often.

**Fruit and Vegetable Consumption** – Only 28 per cent of male seniors and 41 per cent of female seniors consume five to 10 servings of fruits and vegetables per day as recommended by Canada's Food Guide.

**Obesity** – More than half of Saskatchewan seniors consider themselves overweight or obese (58.5%). The percentage of overweight or obese seniors decreases with age, from 64.3% for seniors 65 to 74 years of age to 43.4% for seniors 85 years and older.

**Stress** – The majority of seniors reported their lives as "somewhat stressful," while 12.5 per cent of female seniors and 8.5 per cent of male seniors reported their lives as "stressful."

**Flu Shots** – Sixty-six per cent of Saskatchewan seniors received flu shots in 2003. This figure varied from 57 per cent to 73 per cent across health regions.

## Hospitalizations

- Seniors accounted for more than one-third (37.4%) of hospitalizations in 2002/03. The top three reasons for admission included cardiovascular diseases (26.7% for men and 23.1% for women), injuries (15.3% for men and 18% for women), and cancer (8.1% for men and 6.1% for women).

## Injuries

- Seniors were more than four times (4.9%) likely to be hospitalized for injuries than people less than age 65 (1.2%). Unintentional falls were the most frequent cause of injury hospitalizations in seniors at 76.5%. The older the senior, the higher was their proportion of hospitalized injuries.

## Physician Contacts

- Saskatchewan seniors contacted their physicians an average of 18 times in 2002/03, showing a rise of 2.5 times from 15.5 in 1999/00. The top three reasons seniors saw their doctor included cardiovascular diseases (9.5%), hypertensive disease (8.6%), and other specific health service procedures (6.7%).

## Chiropractor Contacts

- Ten per cent of seniors saw a chiropractor an average of seven times in 2003/04, consisting of 54.5 per cent females and 45.5 per cent males. The majority (59.6%) of seniors who visited a chiropractor were 65 to 74 years of age.

## Prescription Drugs

- Seniors accounted for 46.4 per cent of total prescriptions dispensed in 2003/04 – a trend fairly consistent from 1994/95. Medications for high blood pressure, heart and stomach ailments were the three most common groups of drugs prescribed. The most frequently dispensed individual drugs were furosemide, ramipril, ranitidine, warfarin, hydrochlorothiazide, atenolol, atorvastatin, potassium chloride, levothyroxine and amlodipine.

- Seniors, on average, received more prescriptions as they aged. On average, seniors aged 65 to 74 years filled 22.6 prescriptions in 2003/04, while seniors aged 75 to 84 years filled 29.4 prescriptions, and seniors aged 85 years and older filled 35.2 prescriptions.

## Home Care and Long-Term Care

- In 2003/04, 35.8 per cent of seniors using home care were male and 64.2 per cent were female. Seniors used at least 70 per cent of home care services in 2003/04 in all health regions, with the exception of Five Hills (60.4%), Regina Qu'Appelle (58.5%) and northern Saskatchewan (62.6%).
- Seniors 75 to 84 years of age used home care more often than other seniors.
- Seniors accounted for approximately 90 per cent of all long-term care residents in 2003/04. Northern Saskatchewan proved the exception where seniors comprised 79 per cent of long-term care residents.

## Deaths

- Due to their advancing age, seniors accounted for 81.1 per cent of all deaths in the province in 2003. Cardiovascular disease (26.2%) and cancer (21.5%) were the leading causes of death for Saskatchewan seniors.

## Health Care Costs

- Nearly half of every health care dollar directly benefits seniors. In 1997/98, about 47 cents of every health care dollar directly benefited seniors. In 2002/03, this number increased to 48 cents.
- On average, Saskatchewan Health paid $7,500 per senior for health care services in 2002/03, a 50 per cent increase from $5,000 per senior in 1997/98.

## Current Population

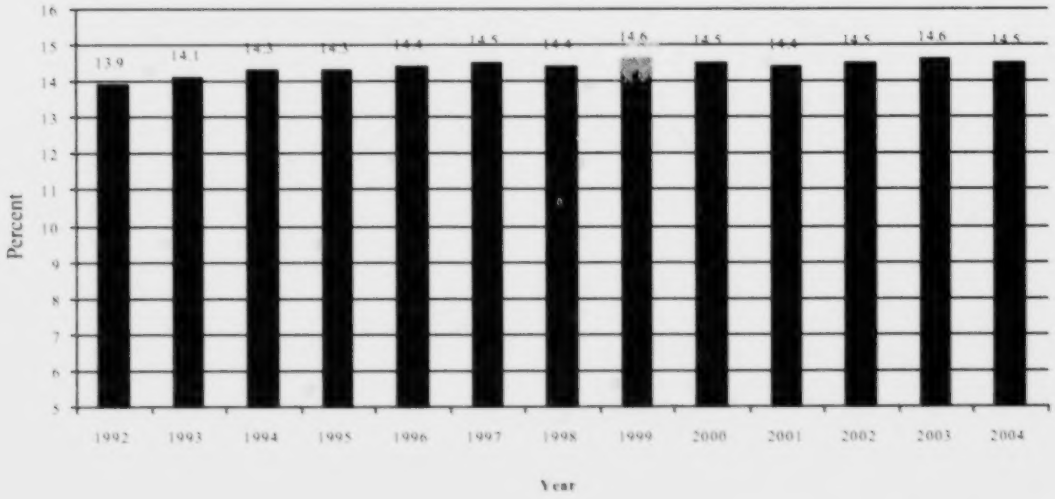
The number of seniors in Saskatchewan is 147,630, or 14.8 per cent of the province's total population of 1,018,057 (2004). This means one in every seven Saskatchewan resident is a senior.

Saskatchewan has the greatest proportion of seniors in Canada, followed by Nova Scotia and Prince Edward Island. Nunavut has the lowest proportion of seniors, with only 2.5 per cent of residents 65 years or older. The national average was 13.0 per cent.

### Seniors Population in Saskatchewan by Year

- The percentage of people age 65 years and older in Saskatchewan has increased slightly from 1992 to 2004. Population projections show this proportion will increase in 2010 when the leading edge of baby boomers enter their senior years.

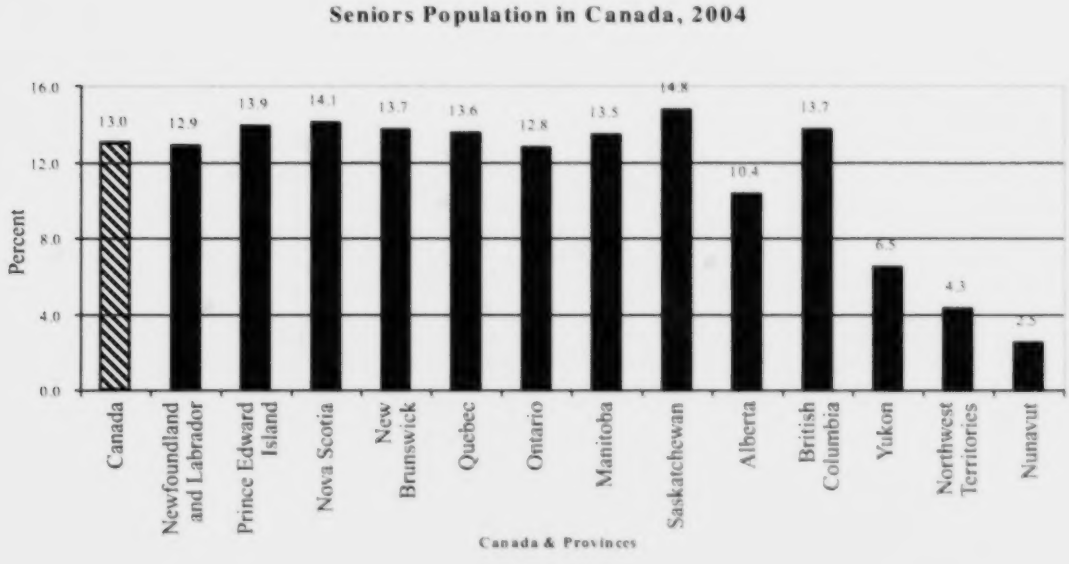
**Proportion of Seniors Population in Saskatchewan, 1992-2004**




Data Source: Saskatchewan Health Covered Population.

## Seniors Population in Canada, 2004

- Saskatchewan has the greatest proportion of seniors in Canada, followed by Nova Scotia and Prince Edward Island. Nunavut has the lowest proportion of seniors, with only 2.5 per cent of residents 65 years or older. The national average was 13.0 per cent.

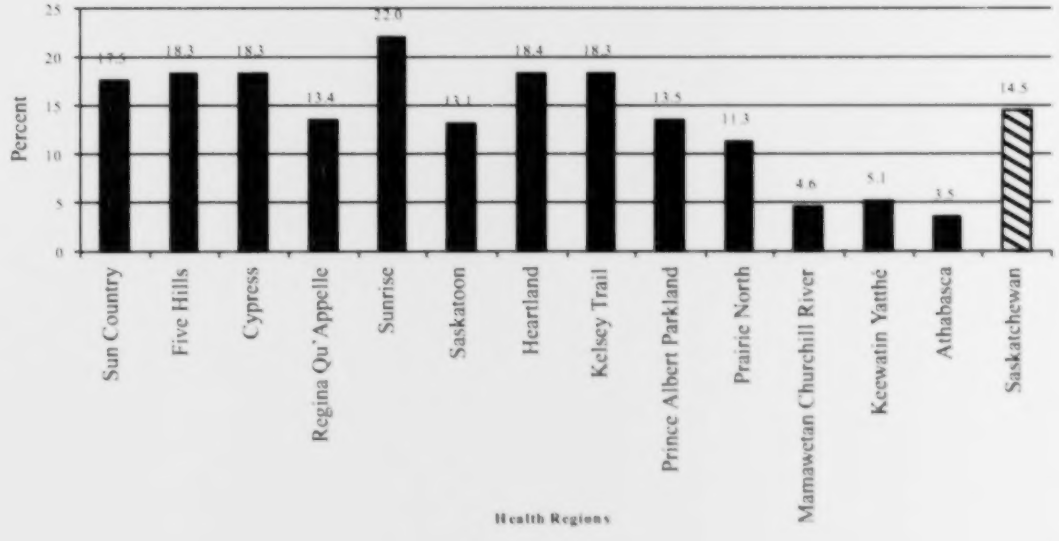



Data Source: Statistics Canada, Demography Division.

## Seniors Population by Regional Health Authority, 2004

- Sunrise Health Region had the highest percentage of seniors in the province at 22 per cent, followed by Heartland Health Region at 18.4 per cent, and Five Hills, Cypress and Kelsey Trail Health Regions at 18.3 per cent.
- Athabasca Health Authority had the smallest share of seniors at 3.5 per cent, followed by Mamawetan Churchill River Health Region at 4.6 per cent.
- Despite being the two largest health regions, Regina Qu'Appelle and Saskatoon both have just over 13 per cent of their population comprised of seniors – less than the provincial percentage of 14.5 per cent.

**Proportion of Seniors Population by Regional Health Authorities, 2004**

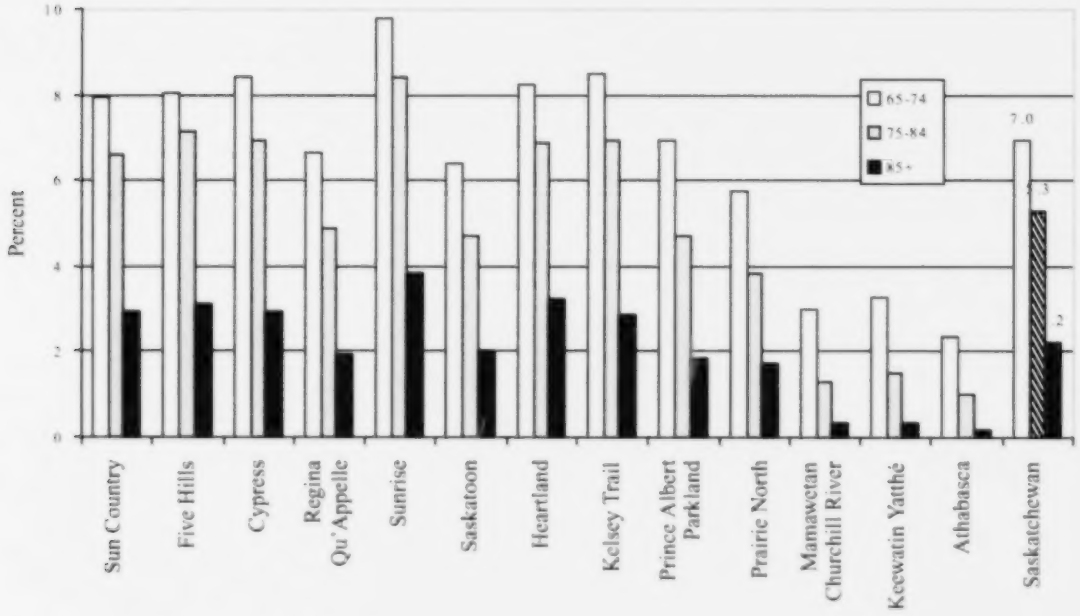



Data Source: Saskatchewan Health Covered Population.

## Seniors Population by Age Group in Regional Health Authorities, 2004

- Approximately half of Saskatchewan seniors are aged 65 to 74 years; one-third are aged 75 to 84 years and one-sixth are aged 85 years and older.
- Sunrise Health Region and Athabasca Health Authority have the highest and lowest percentages of seniors aged 65 to 74 years, at 9.8 per cent and 2.4 per cent, respectively. These two health regions also have the highest (8.4 per cent) and the lowest (1 per cent) percentages of seniors aged 75 to 84 years, respectively. Sunrise Health Region's percentage of seniors 85 years and older is 19 times higher than the same age group living in the Athabasca Health Authority.

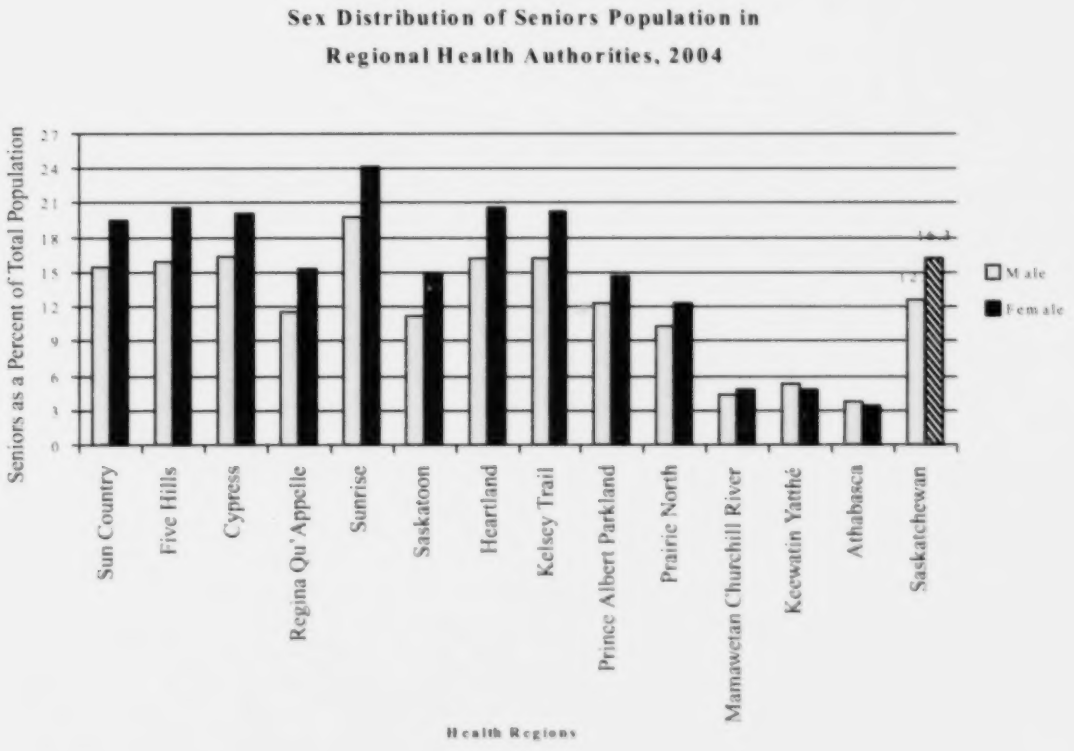
**Age Group Distribution of Seniors Population in Regional Health Authorities, 2004**




Data Source: Saskatchewan Health Covered Population.

## Seniors Population by Sex Distribution, 2004

- In all health regions, except Keewatin Yatthé Health Region and the Athabasca Health Authority, the proportion of female seniors was higher than males.

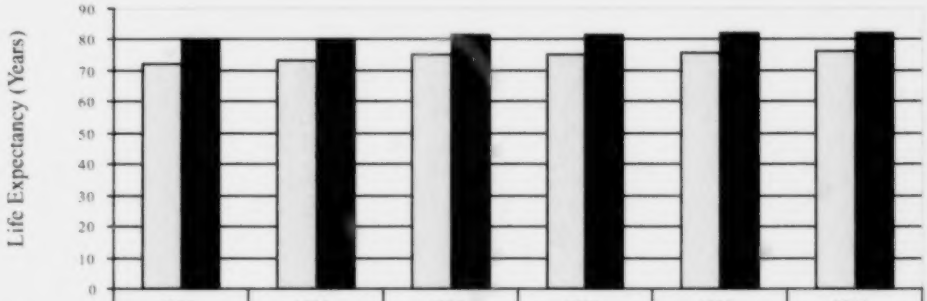



Data Source: Saskatchewan Health Covered Population.

## Life Expectancy

- The life expectancy of Saskatchewan residents has increased steadily. Saskatchewan males born in 2001 can expect to live to 76.3 years and females to 82.2 years. In contrast, a male born in 1980 could expect to live to 72.5 years and a female to 79.9 years.
- At age 65, men in Saskatchewan can expect to live another 17.1 years, while women can expect to live another 21 years.

**Life Expectancy at Birth, 1980-2001**




| | 1980 | 1985 | 1990 | 1995 | 1999 | 2001 |
|---|---|---|---|---|---|---|
| Males | 72.5 | 73.6 | 74.9 | 74.9 | 75.4 | 76.3 |
| Females | 79.9 | 80.2 | 81.2 | 81.5 | 81.8 | 82.2 |

Year

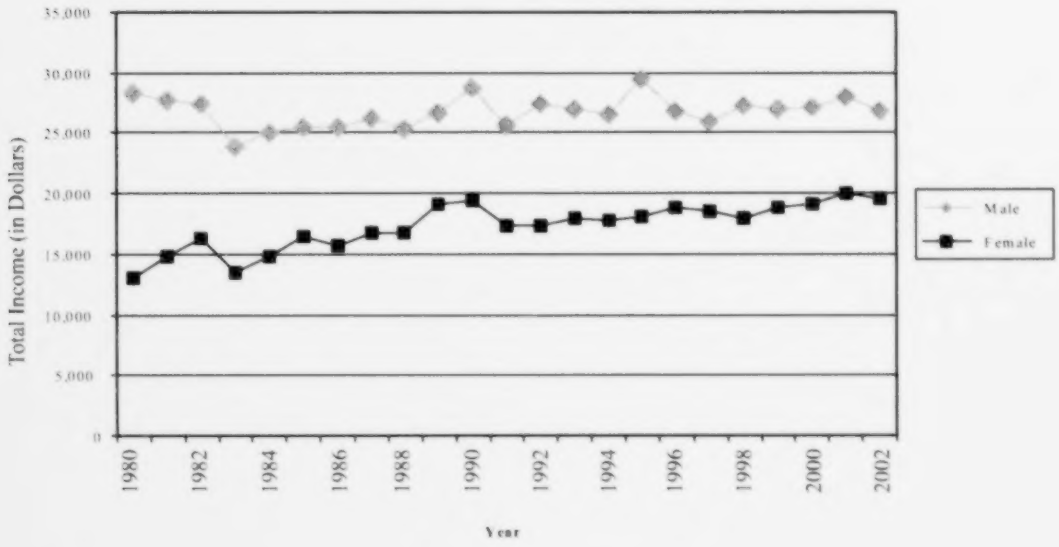
Source: Statistics Canada, Vital Statistics (Births and Deaths Database).

*Health determinants* can be defined as those non-medical factors or conditions that influence a person's health. In this section, we will examine two of these factors – income and education – as they relate to Saskatchewan seniors. Typically, higher levels of income and education are associated with better health.

## Total Income

- The average income for male seniors has remained fairly consistent over time, remaining between $25,000 to $30,000 from 1980 to 2002, except for 1983 when it dropped to $23,900. In 2002, the average total income for male seniors was $26,800.
- The average income for female seniors has risen since 1980, when the average was $13,100. By 2002, the average income for female seniors was $19,600.

**Total Income of Seniors by Sex, 1980-2002**

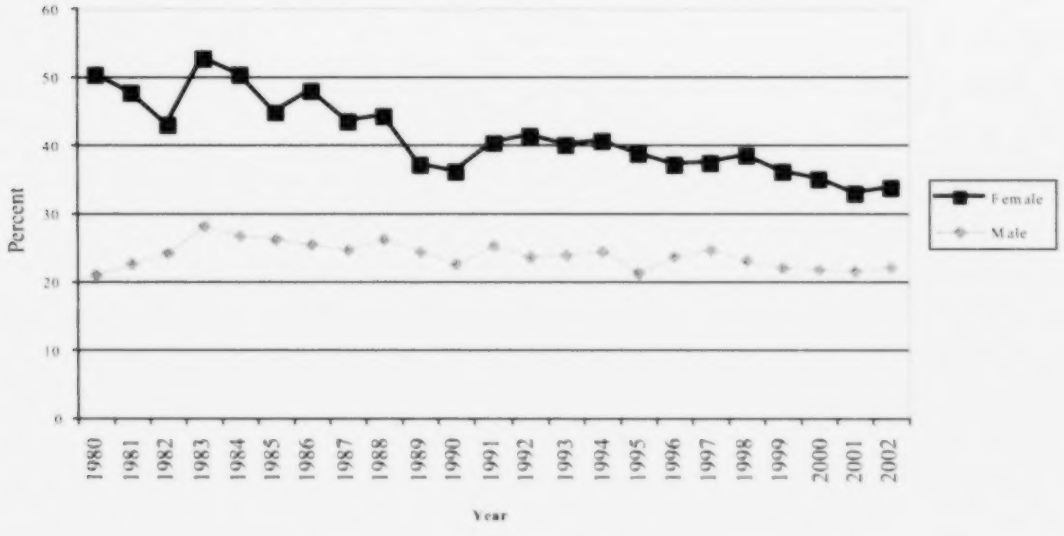



Data Source: Statistics Canada, Income Trends in Canada 1980-2002, Publication 13F0022XCB, Table 14.

## Percentage of Total Income Coming From Old Age Security, Guaranteed Income Supplement and Spousal Allowance

- In 2002, the percentage of average total income that came from Old Age Security (OAS), Guaranteed Income Supplement (GIS) and Spouse's Allowance was 22 per cent for male seniors and 34 per cent for female seniors.
- The percentage of male seniors' average income (calculated at 2002 dollars) that came from OAS, GIS and Spouse's Allowance was fairly stable from 1980 to 2002. In 1983, it reached its highest at 28 per cent.
- The percentage of female seniors' average income received from OAS, GIS and Spouse's Allowance decreased considerably from 1980 to 2002. It reached its highest (52.6 per cent) in 1983, dropping to 34 per cent in 2002.

**Proportion of Seniors Average Total Income Supplied by Old Age Security, Guaranteed Income Supplement, and Spouse's Allowance by Sex, 1980-2002**

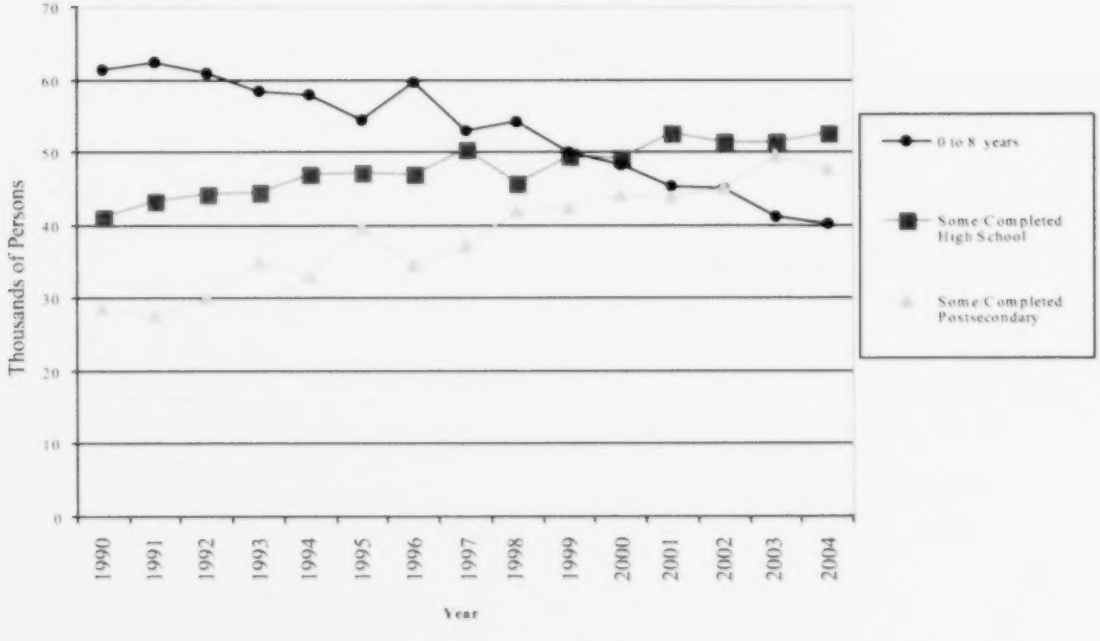



Data Source: Statistics Canada, Income Trends in Canada 1980-2002, Publication 13F0022XCB, Table 14.

## Highest Level of Education Attained by Saskatchewan Seniors

- In the period 1990 to 1998, the highest level of education attained by the majority of seniors ranged from none to eight years of study.
- In 2000, the highest level of education attained by the majority of seniors was completing high school. This was the crossover year with none to eight years of study.
- In 2004, some or completed high school was still the highest level of education attained by the majority of seniors. This was followed by some or completed postsecondary, while none to eight years of study was the lowest.
- In 2004, less than one-third of the senior population (47,700 persons) had some or completed postsecondary education.

**Highest Level of Educational Attainment in Seniors, 1990-2004**



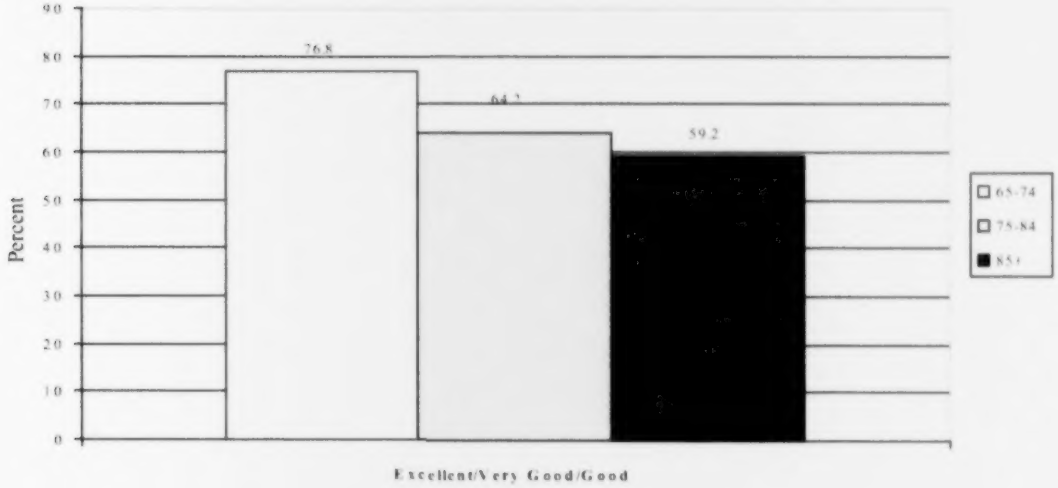

Data Source: Statistics Canada, Table 282-0004.

*Health status* refers to the overall health and well-being of a person or group or persons. It includes factors that contribute to the level of health. In this section, we have included eleven factors relating to seniors' health status.

## Self-Rated Health Status

- The majority of Saskatchewan seniors consider themselves healthy: Seventy-one per cent of seniors reported their health as excellent, very good or good.
- This positive self-rated health status was highest at 76.8 per cent among seniors 65 to 74 years. The numbers steadily decline with age: Seniors aged 75 to 84 reported a 64.2 per cent positive health status, and those seniors 85 years of age and older reported the lowest at 59.2 per cent.

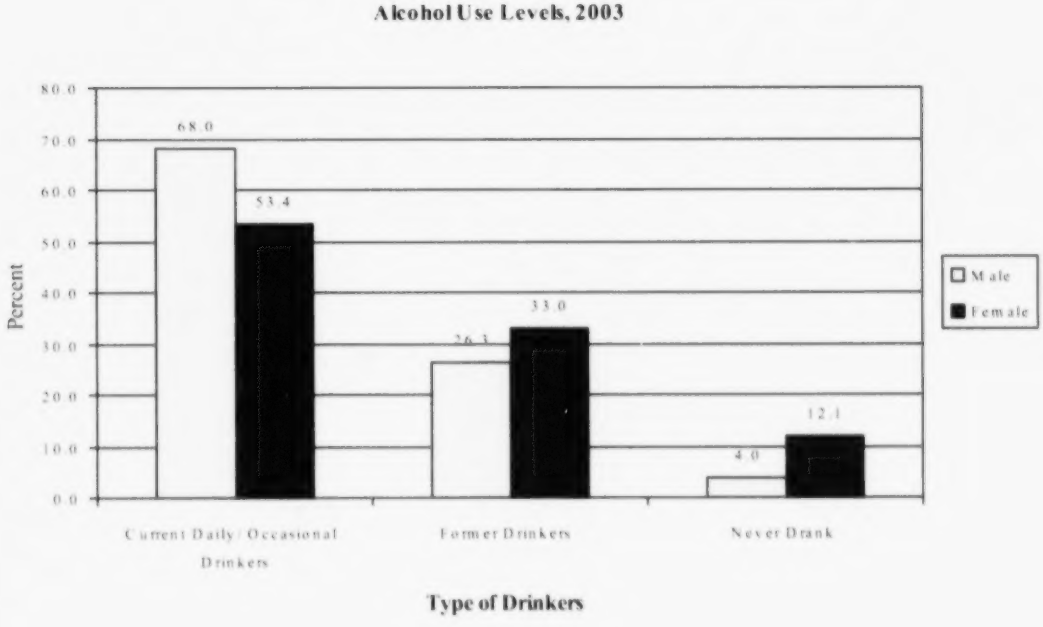
**Self-Rated Health Status, 2003**




Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada.

## Alcohol Consumption

- In 2003, 68.0 per cent of male seniors and 53.4 per cent of female seniors reported daily or occasional consumption of alcohol.
- 26.3 per cent of male seniors and 33.0 per cent of female seniors were former drinkers.
- 4.0 per cent of male seniors and 12.1 per cent of female seniors reported no consumption of alcoholic drinks.

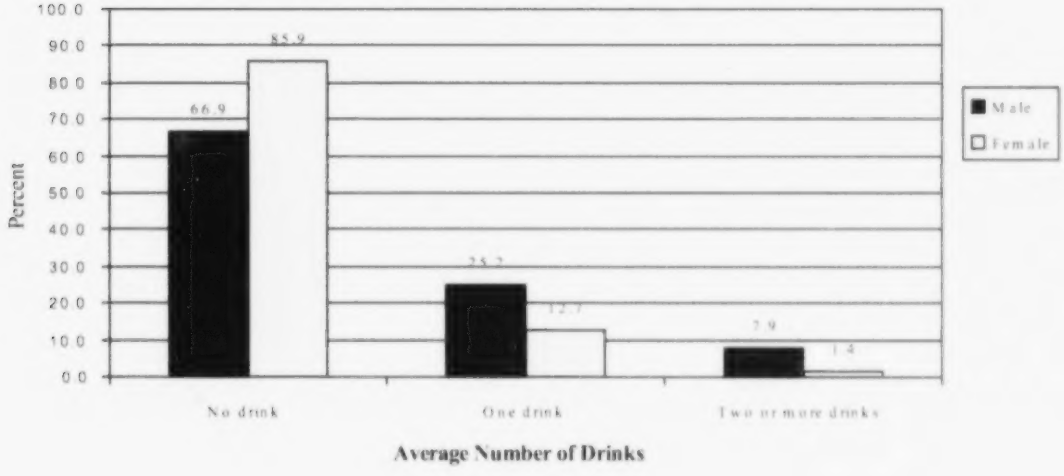



Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada.

## Average Daily Alcohol Consumption

- Among seniors that drink, 66.9 per cent of males and 85.9 percent of females had an alcoholic drink during the study week.
- On the other hand, among those seniors that drink, 25.2 per cent of males and 12.7 per cent of females consumed only one drink.
- 7.9 per cent of male seniors and 1.4 per cent of female seniors had an average of two or more alcoholic drinks during the study week.

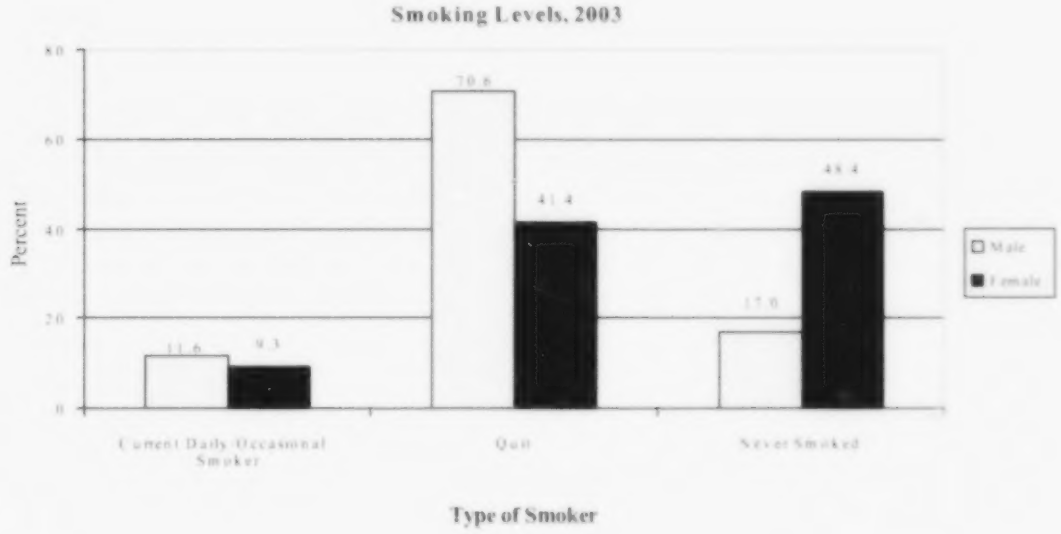
**Average Daily Alcohol Consumption among Current Drinkers in a Specified Week, 2003**




Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada.

## Smoking

- Male seniors (11.6%) are more likely than female seniors (9.3%) to smoke daily or occasionally. Almost half (48.4%) of female seniors and 17 per cent of male seniors have never smoked, while 70.6 per cent of male seniors and 41.1 per cent of female seniors have quit smoking.

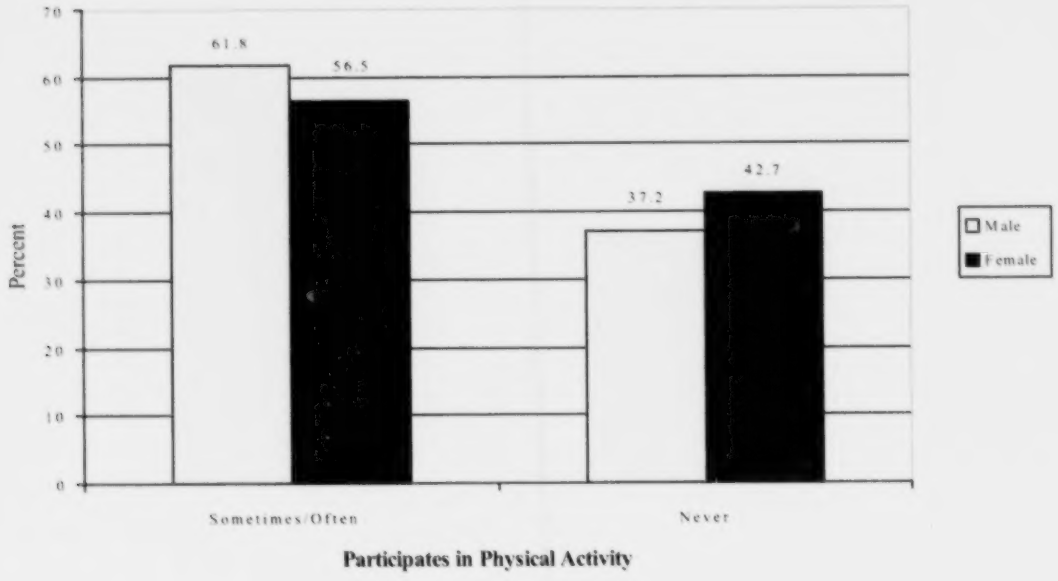



Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada.

## Physical Activity

- More than half of all seniors participate in physical activity sometimes or often.
- 42.7 per cent of female seniors and 37.2 per cent of male seniors did not participate in any physical activity.

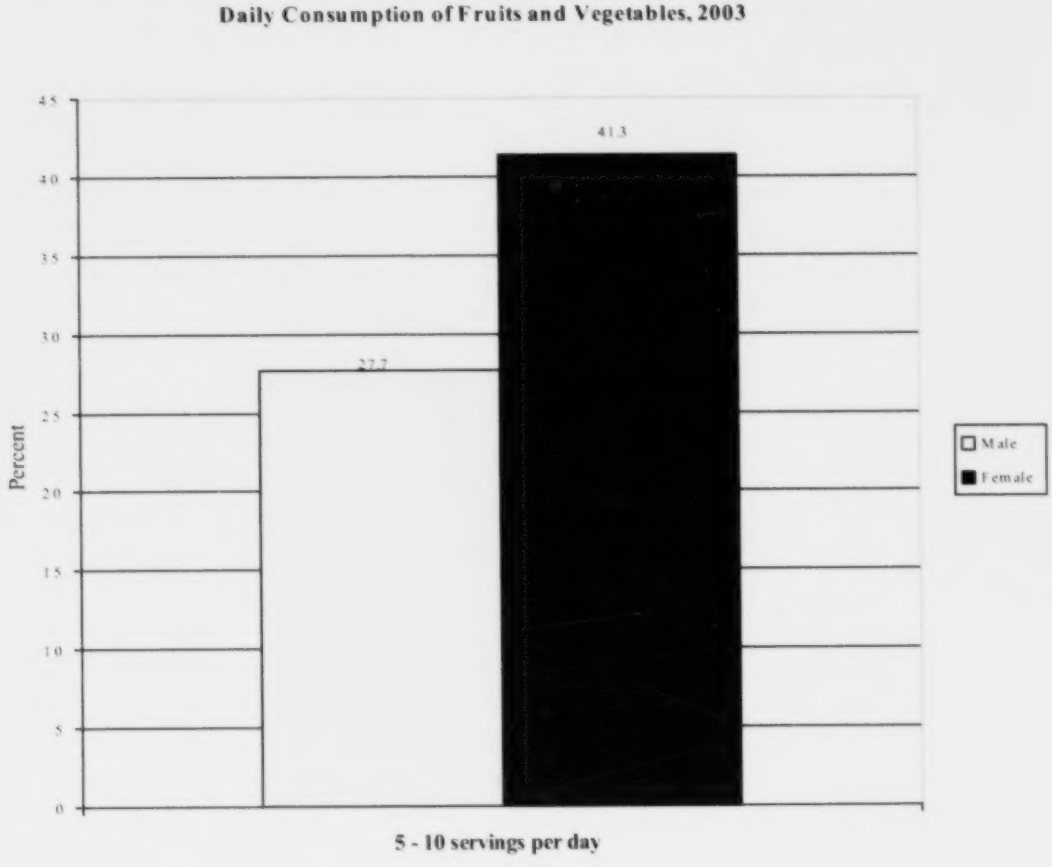
**Participation in Physical Activity, 2003**




Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada.

## Fruit and Vegetable Consumption

- Only 28 per cent of male seniors and 41 per cent of female seniors consume five to 10 servings of fruits and vegetables per day, as recommended by Canada's Food Guide.




Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada.

## Obesity

- More than half of Saskatchewan seniors are overweight or obese (58.5%). The percentage of overweight or obese seniors decreases with age, from 64.3 per cent for seniors aged 65 to 74 years to 43.4 per cent for seniors 85 years and older.
- Body mass index (BMI), a measure of body fat based on height and weight, was used to arrive at this statistic. A BMI of 25.0 to 29.9 is considered overweight and a BMI of 30 or greater is considered obese.

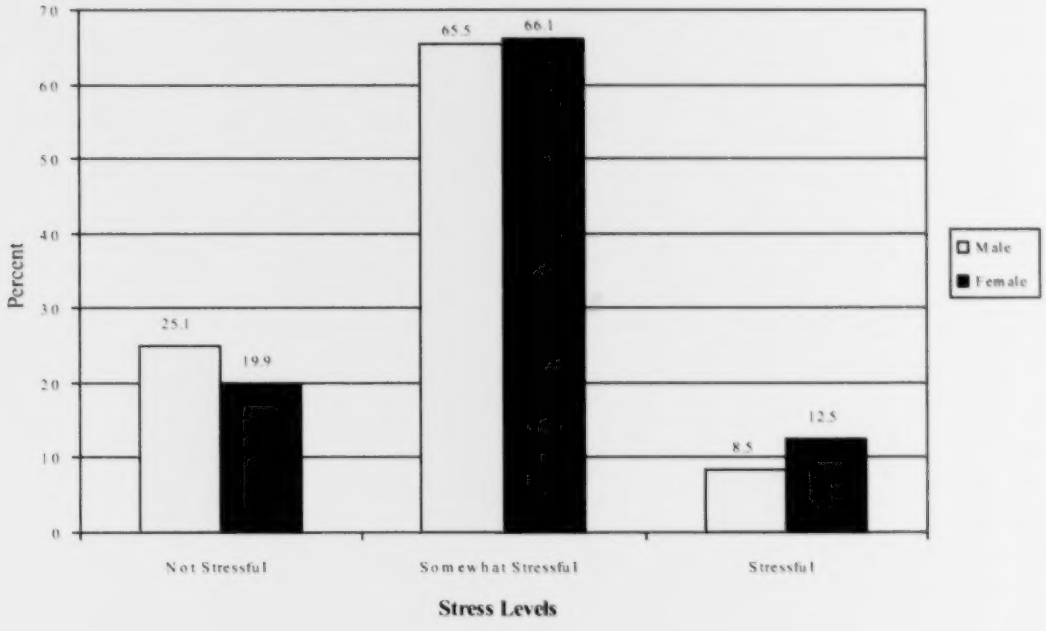
**Percent of Seniors who are Overweight/Obese, 2003**

Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada.

## Stress

- The majority of seniors (both male and female) reported their lives as "somewhat stressful."
- More female seniors (12.5%) than male seniors (8.5%) reported their lives as being "stressful."
- The percentage of male seniors reporting a "not stressful" lifestyle (25.1%) was higher than females (19.9%) by five per cent.

**Sex-Specific Self-Reported Stress, 2003**




Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada.

## Mental Health

- In 2003, 4.8 per cent of Saskatchewan seniors reported a mood disorder, including depression, bipolar disorder, mania or dysthymia (chronic depression).
- 1.96 per cent reported having Alzheimer's Disease or other dementia.

Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada.

## Chronic Conditions

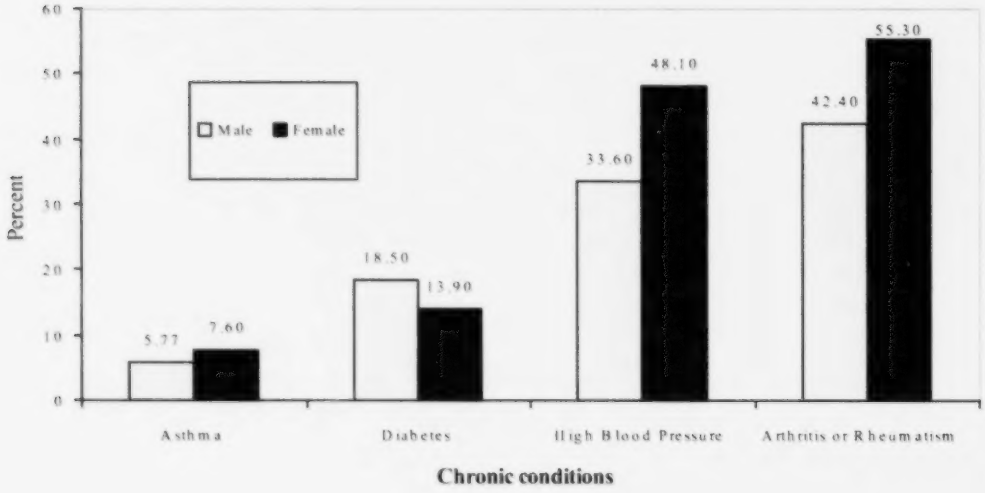
- Overall, female seniors reported a higher percentage of chronic conditions compared to male seniors. Heading the list are:

  – Arthritis or rheumatism (55.3% of female seniors and 42.4% of male seniors)
  – High blood pressure (48.1% of female seniors and 33.6% male seniors)
  – Asthma (7.60% for women and 5.77% for men)

- The lowest percentage of female seniors (7.6%) and male seniors (5.8%) have asthma.

Note: An individual may have more than one of these chronic conditions.

**Sex Specific Prevalence of Chronic Conditions, 2003**




Data Source: Canadian Community Health Survey, Cycle 2.1, 2003. Statistics Canada and National Diabetes Surveillance System (NDSS).

## Flu Shots

- Sixty-six per cent of Saskatchewan seniors received flu shots in 2003/04. This figure varied from 57 per cent to 73 per cent across health regions.
- A variety of health professionals provide flu shots, including public health nurses, physicians, and professionals working in licensed special-care homes. Saskatchewan Health recommends that people aged 65 years of age and older should receive a flu shot every year.

| Regional Health Authority | Number of Adults 65+[3] | Number of Adults 65+ Immunized | Percent of Adults 65+ Immunized |
|---|---|---|---|
| Sun Country [2] | 9,679 | 6,548 | 68% |
| Five Hills | 10,281 | 6,796 | 66% |
| Cypress [2] | 8,149 | 4,981 | 61% |
| Regina Qu'Appelle [2] | 32,874 | 23,170 | 70% |
| Sunrise [2] | 12,894 | 7,982 | 62% |
| Saskatoon [2] | 37,318 | 24,756 | 66% |
| Heartland | 8,292 | 5,247 | 63% |
| Kelsey Trail [1 2] | 7,964 | 4,926 | 57% |
| Prince Albert Parkland [1 2] | 10,375 | 5,888 | 57% |
| Prairie North [1 2] | 8,119 | 5,909 | 73% |
| Mamawetan Churchill River [1] | 964 | 556 | 58% |
| Keewatin Yatthé [1] | 549 | 325 | 59% |
| Athabasca [1] | 85 | 58 | 68% |
| **Total** | **147,543** | **97,142** | **66%** |

[1] Numerator includes services provided by Regional Health Authorities (RHAs) and Northern Inter-Tribal Health Authority health care providers and provided to residents of the RHA and Northern Intertribal Health Authority including First Nations individuals who may reside on- or off-reserve.
[2] Numerator includes services provided by RHA health care providers to residents of the RHA including First Nations individuals who may reside on- or off-reserve. Immunizations provided by Health Canada, First Nations and Inuit Health Branch, health care providers not available for inclusion.
[3] The denominator is obtained from Saskatchewan Health's Covered Population, 2003.

# HOSPITALIZATIONS

For the purpose of this report, "hospitalizations" refers to hospital discharges, and transfers or deaths; it includes both in-patient and day surgeries. One person could account for more than one hospitalization if he or she is hospitalized more than once in a year.

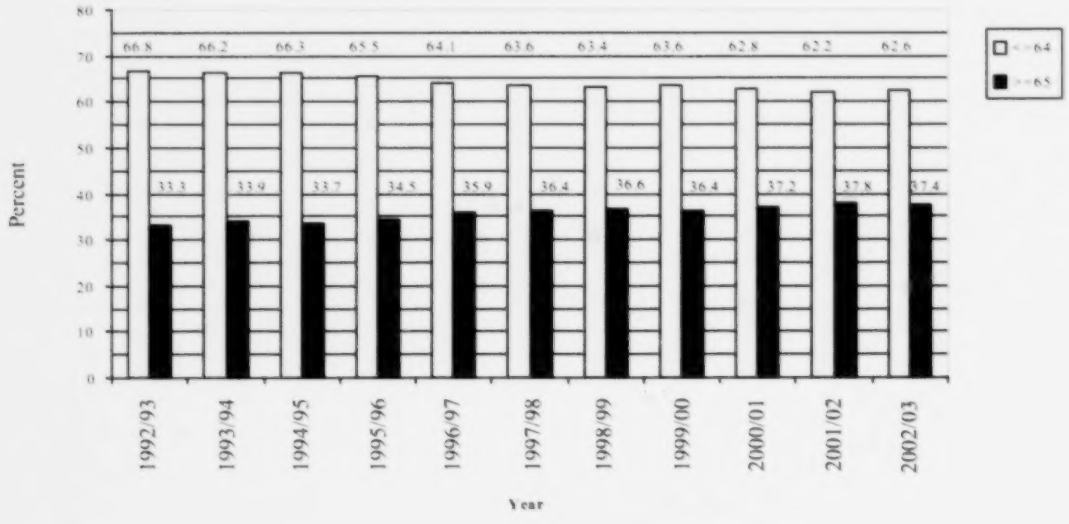
"In-patient" refers to patients who are admitted into a bed in the hospital, excluding day surgeries. When referring to hospitalized "individuals," each person is counted only once per year, whether they were hospitalized once or many times that year.

Analysis focused on primary diagnoses, which describe the patient's most significant condition during hospitalization.

## Percentage of Hospitalizations in Seniors and Non-Seniors

- Seniors, who represent 14.8 per cent of the population, accounted for more than one-third (37.4%) of hospitalizations in 2002/03.
- Seniors accounted for at least 33.3 per cent of hospitalizations between 1992/93 and 2002/03. The proportion of seniors hospitalized during this period increased by 12.3 per cent.

**Proportion of Hospitalizations: Seniors versus Non-Seniors, 1992/93-2002/03**

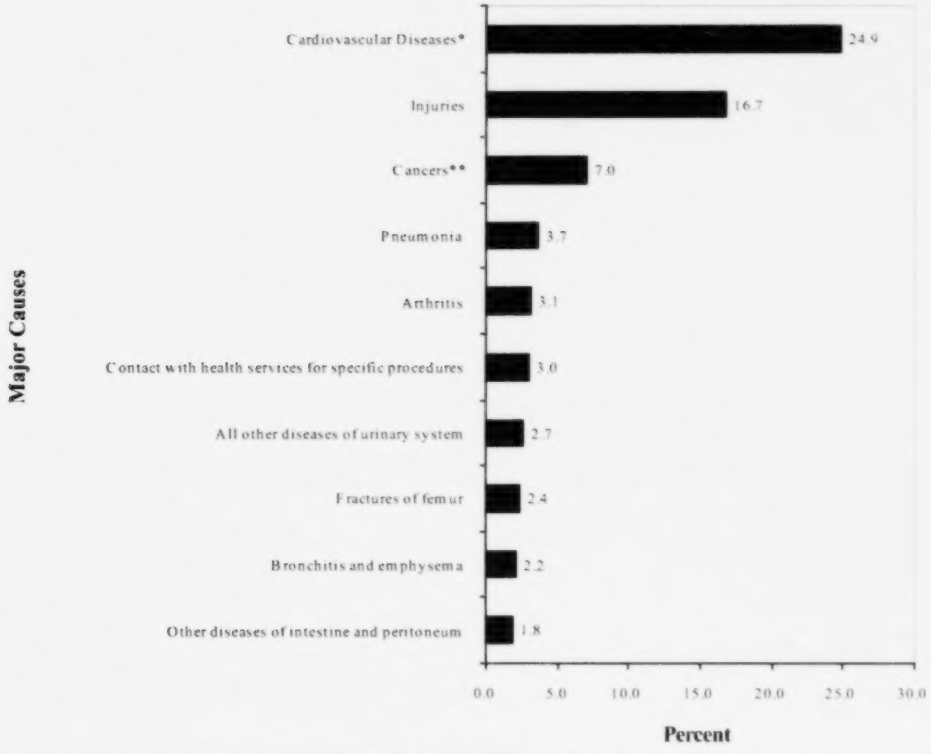



Data Source: Saskatchewan Health Year-End Hospital Data, 1992/93-2002/03 based on counts of hospital separations (includes both in-patient and day surgeries).

## Major Causes of In-Patient Hospitalizations

- The top three reasons for in-patient admissions in 2002/03 were cardiovascular diseases (24.9%), injuries (16.7%), and cancer (7%).

**Major Causes of Inpatient Hospitalizations in Seniors (Both Sexes), 2002/03**




Data Source: Saskatchewan Health Year-End Hospital Data, 2002/03 based on counts of hospital separations.

* Cardiovascular diseases include ICD-9 codes 390-459. These codes include all diseases of the circulatory system including acute myocardial infarction, ischemic heart disease, valvular heart disease, peripheral vascular disease, arrhythmias, high blood pressure and stroke.

**Cancers include all malignant neoplasms, leukaemia and carcinomas (Canadian List Numbers 15-41, 45, 46).

Excluded are signs and symptoms and other ill-defined conditions, and other reasons for contact with health services.

Large number of minor causes having a proportion of less than 1.8% in-patient hospitalizations are not shown in this chart.

## In-Patient Hospitalizations – Male Seniors

- The top three reasons for Saskatchewan male seniors to be hospitalized in 2002/03 were cardiovascular diseases (26.7%), injuries (15.3%), and cancers (8.1%).

Data Source: Saskatchewan Health Year-End Hospital Data, 2002/03 based on counts of hospital separations.

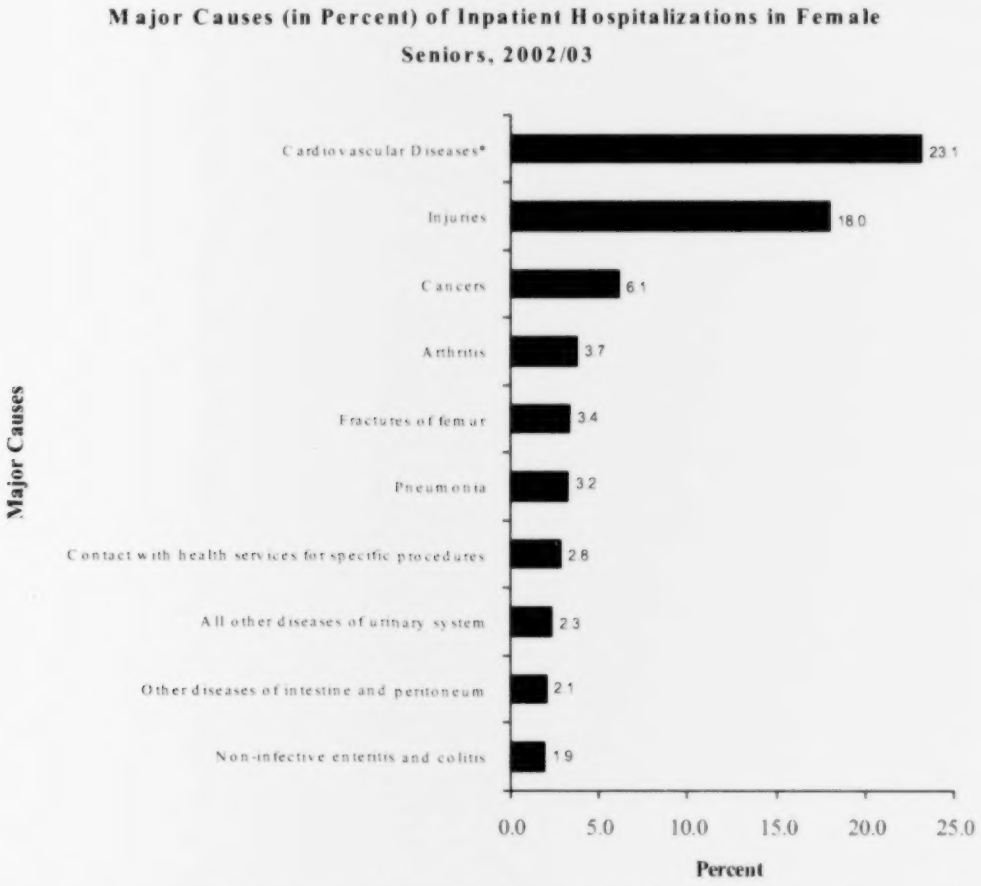
* Cardiovascular diseases include acute myocardial infarctions, ischemic heart disease, rheumatic heart disease and other heart disease.

Excluded are signs and symptoms and other ill-defined conditions, and other reasons for contact with health services.

Large number of minor causes having a proportion of less than 1.9% in-patient hospitalizations are not shown in this chart.

## In-Patient Hospitalizations – Female Seniors

- The top three reasons for Saskatchewan female seniors to be hospitalized in 2002/03 were cardiovascular diseases (23.1%); injuries (18%); and cancers (6.1%).




Data Source: Saskatchewan Health Year-End Hospital Data, 2002/03 based on counts of hospital separations.

* Cardiovascular diseases include acute myocardial infarctions, ischemic heart disease, rheumatic heart disease and other heart disease.

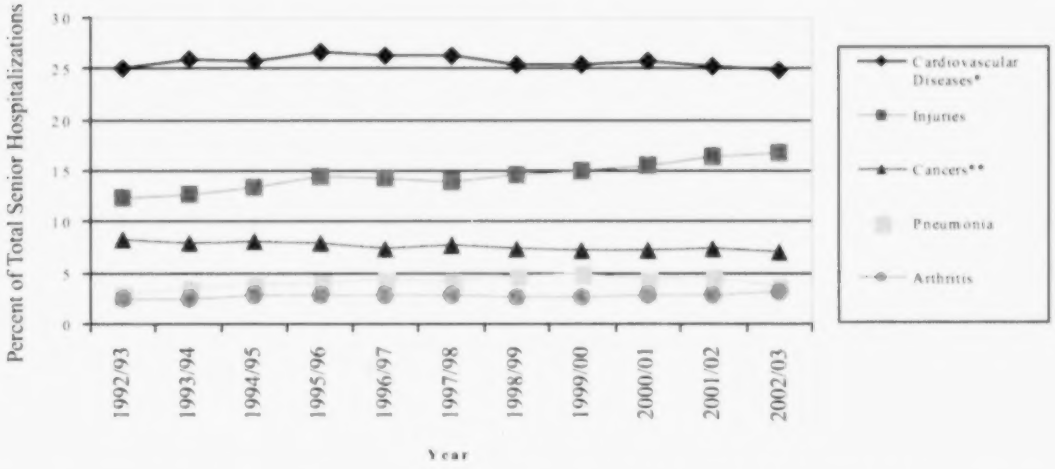
Excluded are signs and symptoms and other ill-defined conditions, and other reasons for contact with health services.

Large number of minor causes having a proportion of less than 1.9% in-patient hospitalizations are not shown in this chart.

## Trends in Seniors In-Patient Hospitalizations, 1992/93 to 2002/03

- The top five causes for Saskatchewan seniors to be hospitalized between 1992/93 and 2002/03 were cardiovascular disease, injuries, cancers, pneumonia and arthritis.
- Cardiovascular disease was the top cause for hospitalization (25+%) during this time period.
- Injuries ranged from more than 12 per cent to less than 17 per cent, representing a rise of 36.1 per cent.
- With the exception of cardiovascular disease and injuries, the percentage of all other major reasons for hospitalization was less than 8.5 per cent.

**Major Causes for Seniors Inpatient Hospitalization in Saskatchewan, 1992/93-2002/03**




Data Source: Saskatchewan Health Year-End Hospital Data, 1992/93 to 2002/03 based on counts of hospital separations.

* Cardiovascular diseases include acute myocardial infarctions, ischemic heart disease, rheumatic heart disease and other heart disease.

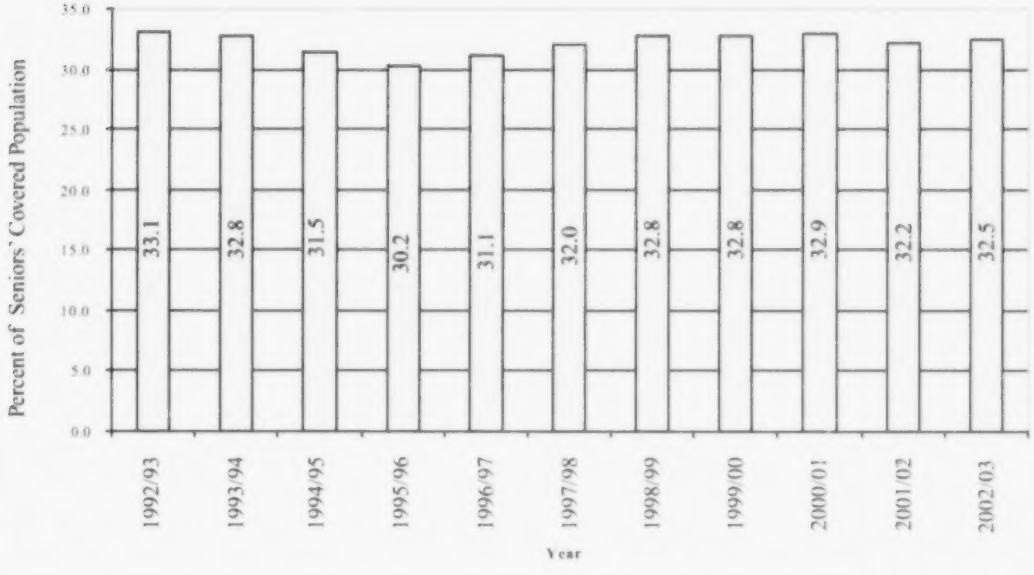
**Cancers include all malignant neoplasms, leukaemia and carcinomas (Canadian List Numbers 15-41, 45, 46).

Excluded in this chart are signs and symptoms and other ill-defined conditions, and other reasons for contact with health services.

## Percentage of Seniors Hospitalizations, Including Day Surgery, 1992/93 to 2002/03

- The percentage of seniors hospitalized has remained fairly stable from 1992/93 to 2002/03.
- At least 30 per cent of Saskatchewan seniors were hospitalized each year.

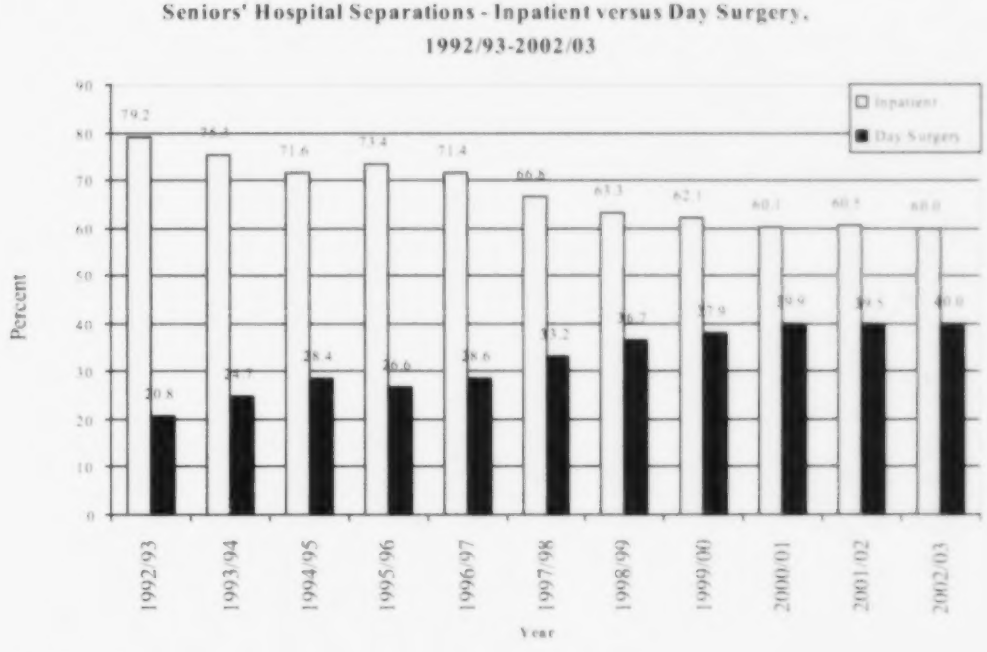
**Proportion of Saskatchewan Seniors Hospitalized, 1992/93-2002/03**




Data Source: Saskatchewan Health Year-End Hospital Data, 1992/93 to 2002/03 based on counts of individuals who were hospitalized.

## Hospitalization of Saskatchewan Seniors – In-Patient versus Day Surgery, 1992/93 to 2002/03

- Seniors had an average of 58,429 in-patient and 28,127 day surgery hospitalizations a year from 1992/03 to 2002/03. In 2002/03, in-patient hospitalizations accounted for 60 per cent (43,490) and day surgeries accounted for 40 per cent (29,800). Overlaps in these counts occurred, as seniors who received both in-patient and day surgery services in the same year were included in both counts.
- The percentage of day surgery hospitalizations almost doubled from 1992/93 to 2002/03.

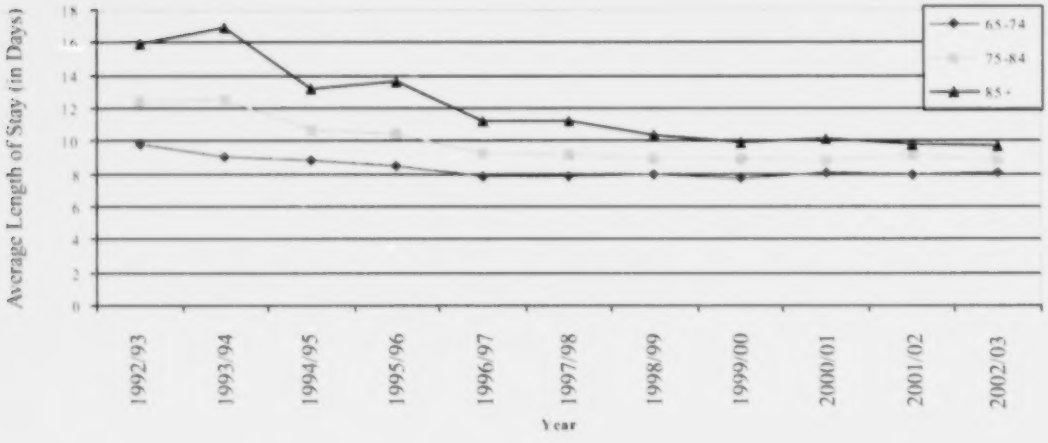



Data Source: Saskatchewan Health Year-End Hospital Data, 1992/93 to 2002/03 based on counts of hospitalizations.

## Average Length of Stay: Cardiovascular Diseases

- The average length of stay for cardiovascular disease hospitalization was highest (12.0 days) for seniors aged 85 years and older, followed by 9.9 days for seniors aged 75 to 84 years, and 8.3 days for those aged 65 to 74 years.
- Between 1992/93 and 2002/03, the average length of stay declined for each age group.

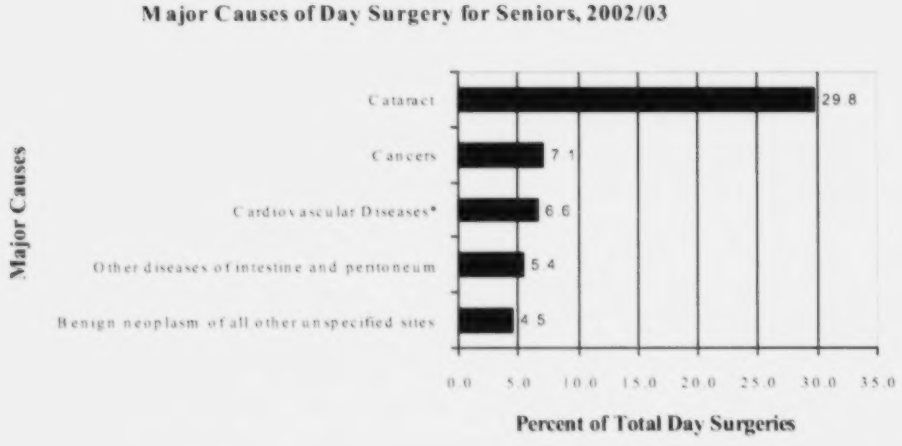
**Average Length of Stay in Hospital with Cardiovascular Diseases, 1992/93-2002/03**




Data Source: Saskatchewan Health Year-End Hospital Data, 1992/93-2002/03.

## Day Surgery by Diagnosis

- The top day surgeries for seniors in 2002/03 were cataracts (29.8%), cancers (7.1%) and cardiovascular diseases (6.6%).




Data Source: Saskatchewan Health Year-End Hospital Data, 2002/03.
* Cardiovascular diseases include heart diseases, ischemic heart disease and acute myocardial infarction. Individual causes of day surgeries accounting for less than 4.5% are not shown in this chart.

## In-Patient Hospitalizations and Average Length of Stay

- The following table shows the number of in-patient hospitalizations for the three top causes of in-patient hospitalizations in 2002/03. For example, 9,383 individuals had a total of 12,937 in-patient hospitalizations for cardiovascular diseases. That is, some individuals were hospitalized more than once during the year.
- The table also shows the average length of stay, which is calculated as the total number of days of stay in hospital, divided by the total number of injury admissions for each of the major causes of hospitalization.

**The in-patient hospitalizations, patients involved in and Average Length of Stay (ALOS) for major causes of seniors hospitalizations, 2002/03**

| | In-patient hospitalizations | Patients involved | ALOS |
|---|---|---|---|
| Cardiovascular Diseases* | 12,937 | 9,383 | 8.8 |
| Injuries | 8,716 | 7,287 | 13.2 |
| Cancers | 3,656 | 2,868 | 11.1 |

Data Source: Saskatchewan Health Year-End Hospitalization Data, 2002/03.
* Cardiovascular diseases include acute myocardial infarctions, ischemic heart disease, rheumatic heart disease and other heart disease.

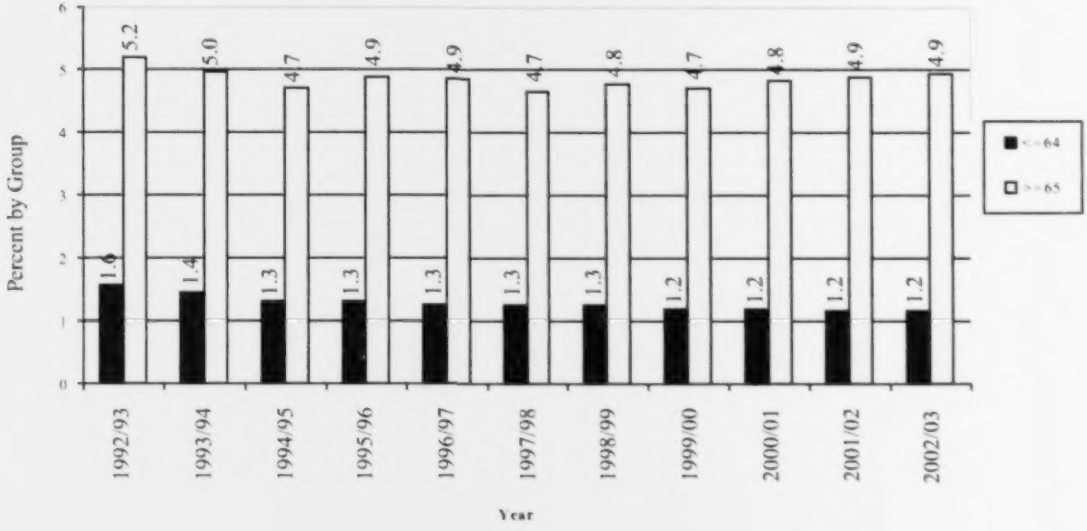
Injuries are a significant health problem with potentially serious consequences. Hospitalization records are the main source for injury information in this document.

This section does not include injuries that did not require hospitalization or those injuries seen in emergency room without admission. Also excluded are "surgical and medical procedures as the cause of abnormal reaction of patient or later complication, without mention of misadventure at the time of procedure, drugs, medicaments and biological substances causing adverse effects in therapeutic use."[1]

## Percentage of Seniors and Non-Seniors with Hospitalized Injuries, 1992/93 to 2002/03

- In 2002/03, Saskatchewan seniors were more than four times (4.9%) likely to be hospitalized for injuries compared to non-seniors (1.2%). This rate has remained fairly constant between 1992/93 and 2002/03.

**Proportion of Seniors and Non-Seniors with Hospitalized Injuries, 1992/93-2002/03**



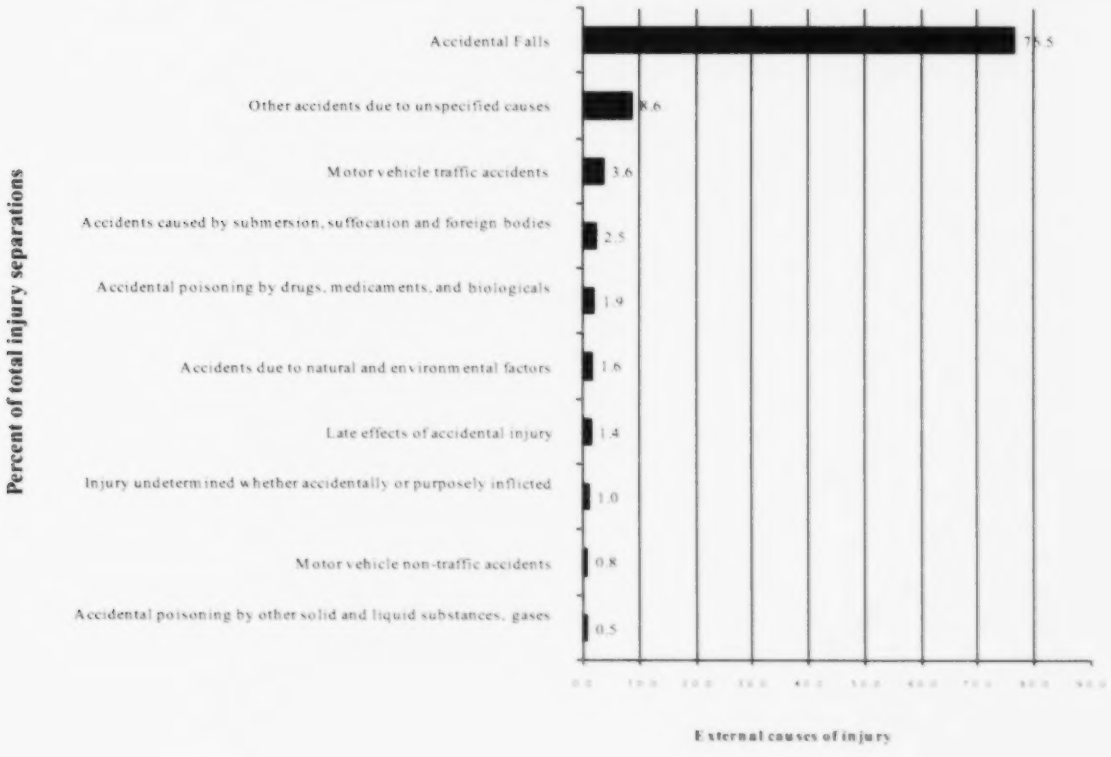

Data Source: Saskatchewan Health Year-End Hospital Data, 1992/93-2002/03.

[1] International Classification of Diseases (ICD) 9th Revision, World Health Organization.

## Top Ten Causes of Injury Hospitalizations*

- Accidental falls were the most frequent cause of hospital-diagnosed injury (76.5%) in seniors in 2002/03.

**Percentage of Injury Separations by Categories in Seniors, 2002/03**

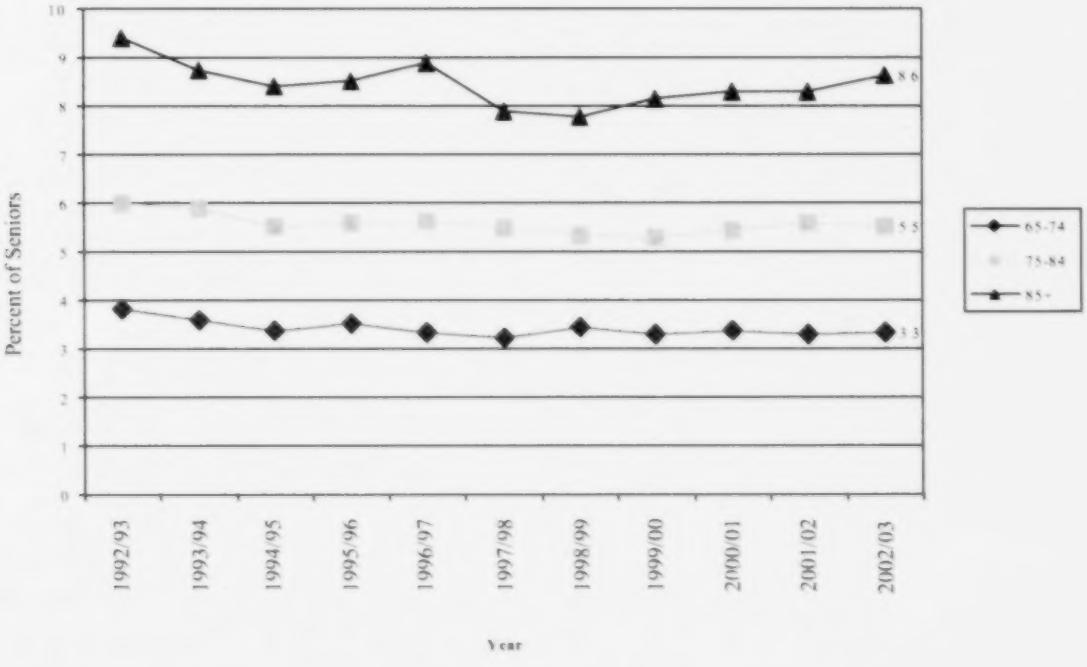



Data Source: Saskatchewan Health Year-End Hospital Data, 2002/03.
*This table accounts for all causes of injury occurring outside of a hospital which lead to seniors being hospitalized. It excludes medical, surgical or drug incidents or procedures occurring in hospitals.

## Percentage of Seniors Diagnosed with Hospitalized Injuries by Age Group, 1992/93 to 2002/03

- The following chart shows the actual number of seniors injured by their age group, not the number of their hospitalizations.
- Approximately 5 per cent of Saskatchewan seniors in 2002/03 were hospitalized for an injury. Accidental falls were the most frequent cause of hospitalized injuries (76.5%) for seniors in 2002/03.
- The percentage of seniors hospitalized with injuries increased with age, although there was a slight decline observed in all age groups from 1992/93 to 2002/03.

**Proportion of Seniors with Injury Hospitalizations by Age Group, 1992/93-2002/03**




Data Source: Saskatchewan Health Year-End Hospital Data, 1992/93-2002/03.

# PHYSICIAN CONTACTS

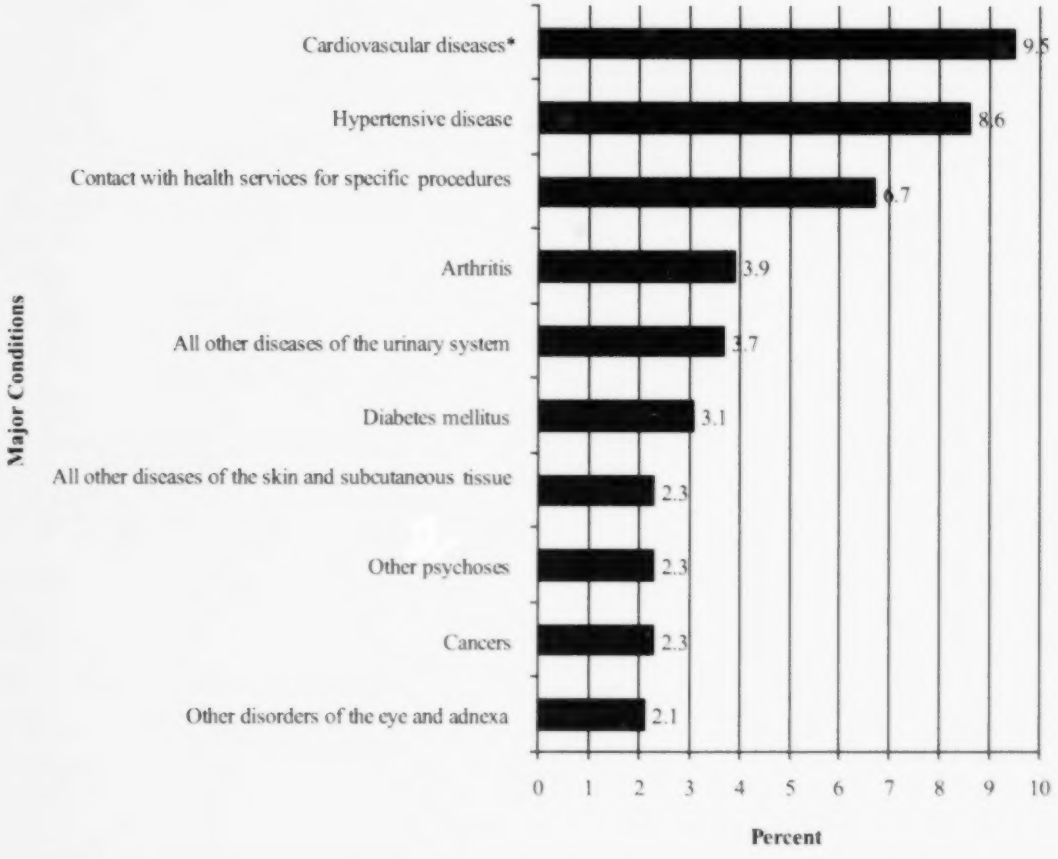
In Saskatchewan, "physician contacts" refers to the services provided by physicians who bill the health care system on a fee-for-service basis. This means physicians record each procedure and diagnosis in order to receive payment for their services. As a result of this fee-for-service billing arrangement, Saskatchewan Health has accumulated data concerning physician services.

Physicians who work on alternate payment plans, such as a contract or salary, submit "dummy" billing records in order to complete the physician services dataset. However, this procedure is not always consistently followed; therefore, data may be incomplete for physicians who work on an alternate payment plan.

## Physician Contacts by Saskatchewan Seniors

- Cardiovascular disease was the most frequent diagnosis (9.5%) made by physicians for seniors in 2002/03.
- Hypertensive disease (high blood pressure) was the second highest diagnosis (8.6%), followed by contact with health services for specific treatment procedures (6.7%) and arthritis (3.9%).
- Diabetes made up 3.1 per cent of diagnoses.
- Other conditions, including arthritis and cancer, were each less than four per cent of diagnoses.

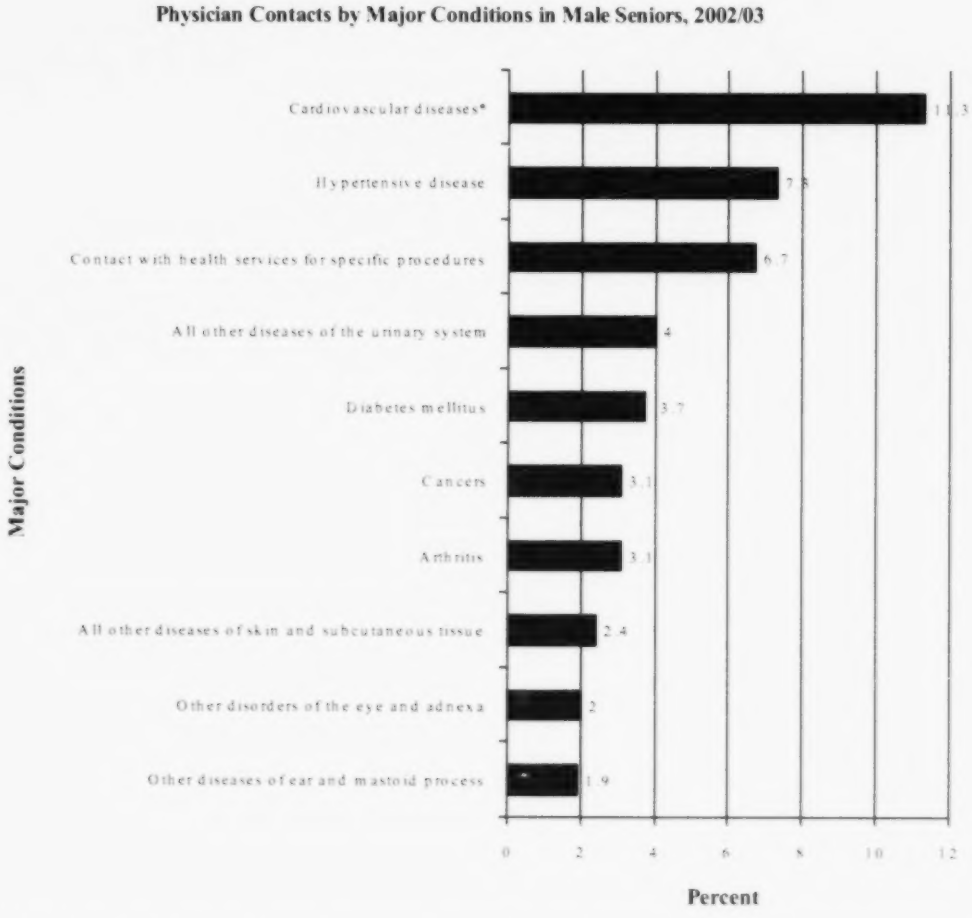
**Physician Contacts by Major Conditions in All Seniors, 2002/03**




Data Source: Medical Services Branch, Saskatchewan Health Physician Billing Data, 2002/03.
* Cardiovascular diseases include acute myocardial infarction, ischemic heart disease, rheumatic heart disease and other heart disease.
This does not include symptoms and signs and other ill-defined conditions or other reasons for contact with health services.

## Physician Contacts by Major Condition – Male Seniors

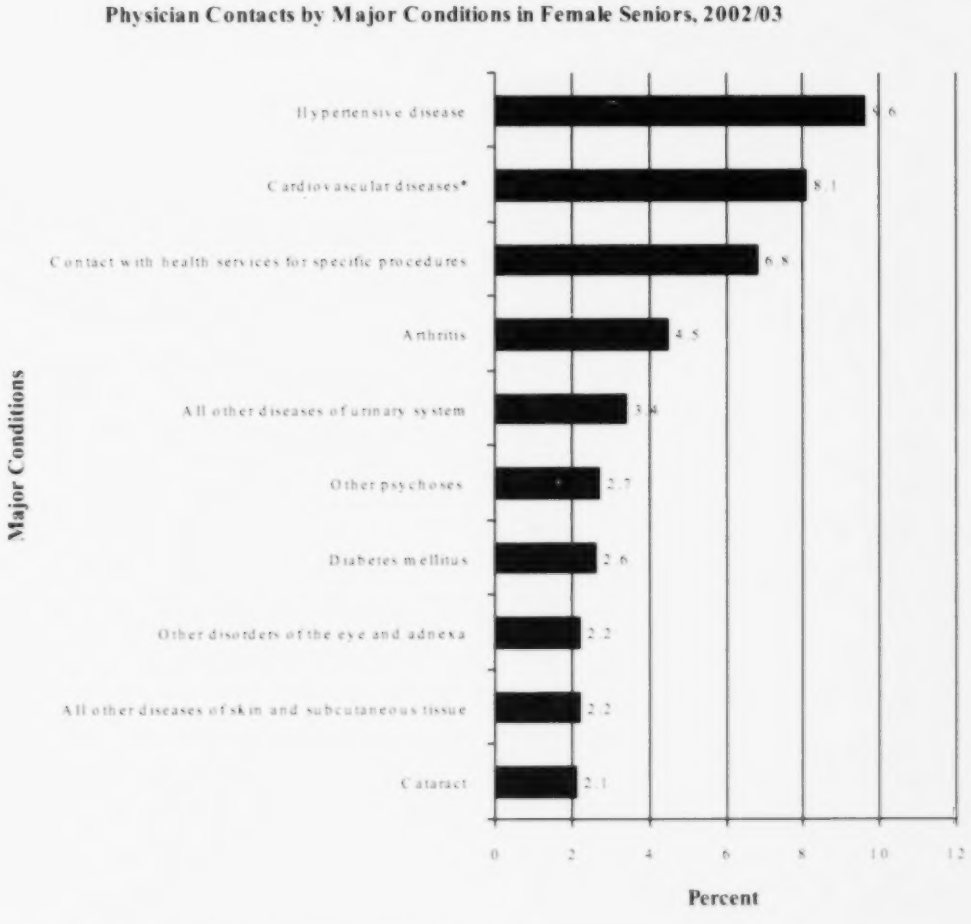
- Cardiovascular disease was the most frequent diagnosis (11.3%) made by physicians for male seniors in 2002/03, followed by hypertensive disease (7.3%) and contact for specific procedures (6.7%).




Data Source: Medical Services Branch, Saskatchewan Health Physician Billing Data, 2002/03.
* Cardiovascular diseases include acute myocardial infarction, ischemic heart disease, rheumatic heart disease and other heart disease.
** Cancers include all malignant neoplasms.
This does not include symptoms and signs and other ill-defined conditions or other reasons for contact with health services.

## Physician Contacts by Major Condition – Female Seniors

- Hypertensive disease was the most frequent diagnosis (9.6%) made by physicians for female seniors in 2002/03, followed by cardiovascular diseases (8.1%) and contact for specific procedures (6.8%).

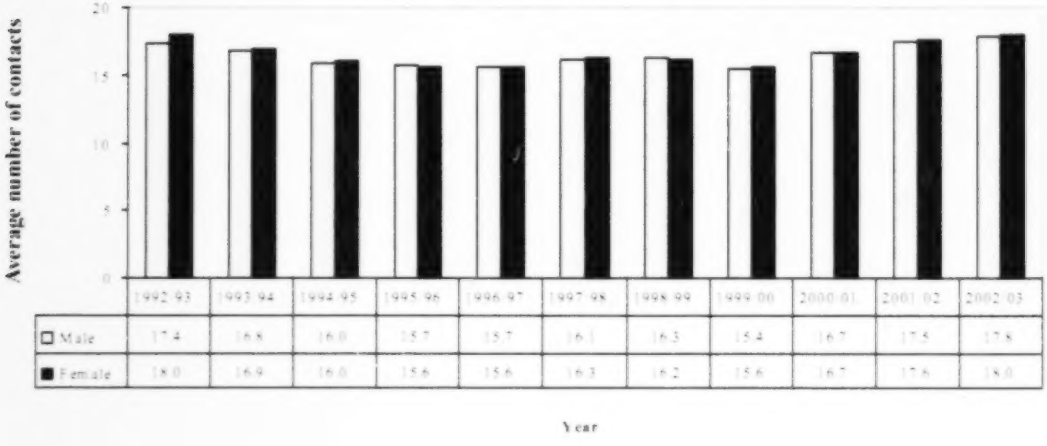



Data Source: Medical Services Branch, Saskatchewan Health Physician Billing Data, 2002/03.
* Cardiovascular diseases include acute myocardial infarction, ischemic heart disease, rheumatic heart disease and other heart disease.
This does not include symptoms and signs and other ill-defined conditions or other reasons for contact with health services.

## Average Number of Physician Contacts Per Saskatchewan Senior

- Saskatchewan seniors contacted their physicians an average of 18 times in 2002/03, showing a rise of 2.5 times from 15.5 in 1999/00.
- Female seniors contacted a physician between 15.6 and 18 times compared to male seniors who ranged from 15.4 to 17.8 times.

**Physician Contacts per Senior, 1992/93-2002/03**




| | 1992/93 | 1993/94 | 1994/95 | 1995/96 | 1996/97 | 1997/98 | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Male | 17.4 | 16.8 | 16.0 | 15.7 | 15.7 | 16.1 | 16.3 | 15.4 | 16.7 | 17.5 | 17.8 |
| Female | 18.0 | 16.9 | 16.0 | 15.6 | 15.6 | 16.3 | 16.2 | 15.6 | 16.7 | 17.6 | 18.0 |

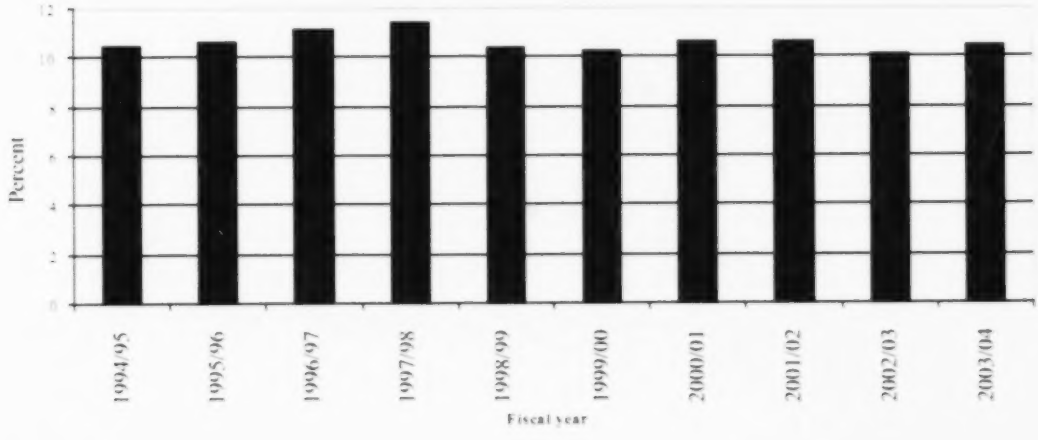
Data Source: Medical Services Branch, Saskatchewan Health Physician Billing Data, 1992/93 to 2002/03.

Saskatchewan Health insures most chiropractic services, either partially or fully. As a result, Saskatchewan Health has accumulated data concerning chiropractic services.

## Percentage of Saskatchewan Seniors Using Chiropractic Services*

- More than 10 per cent of Saskatchewan seniors saw a chiropractor in any year from 1994/95 to 2003/04.
- In 2003/04, 54.5 per cent of seniors seeing a chiropractor were female while 45.5 per cent were males. This male/female ratio was consistent throughout the 10-year period (chart not shown) between 1993/94 and 2003/04.
- In 2003/04, the highest proportion of chiropractor visits in seniors was in the 65-74 year age group (59.6%), followed by 75-84 years (33.6%) and 85 plus years (6.8%).

**Proportion of Seniors Using Chiropractic Services, 1994/95-2003/04**

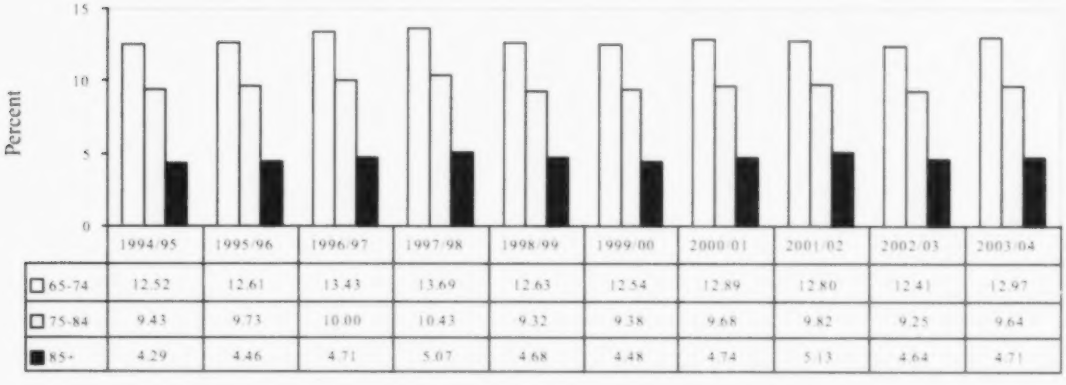



Data Source: Saskatchewan Health, Medical Services Branch.
*This chart shows the percentage of seniors who visited a chiropractor from 1994/95 to 2003/04. It does not show the total number of visits they made.

## Percentage of Seniors Using Chiropractic Services by Age Group, 1994/95 to 2003/04

- As seniors age, their use of chiropractic services decreases. Of the total number of chiropractic visits for seniors, 59.6 per cent were in the 65-74 year age group, 33.6 per cent were in the 75-84 age group and 6.8% were in the 85 years and over category.
- The proportion of seniors using chiropractic services closely followed their population ratios in their age groups. That is, half of seniors aged 65 to 74 used chiropractic services, one-third of seniors aged 75 to 84 used these services, while only one-sixth of seniors aged 85 and older used chiropractic services.

**Percentage of Seniors Utilizing Chiropractic Services by age group, 1994/95-2003/04**



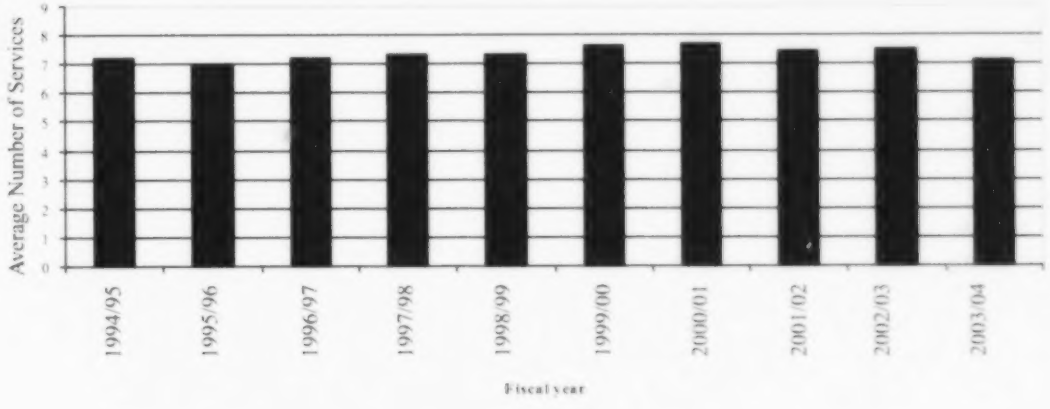

| | 1994/95 | 1995/96 | 1996/97 | 1997/98 | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 |
|---|---|---|---|---|---|---|---|---|---|---|
| 65-74 | 12.52 | 12.61 | 13.43 | 13.69 | 12.63 | 12.54 | 12.89 | 12.80 | 12.41 | 12.97 |
| 75-84 | 9.43 | 9.73 | 10.00 | 10.43 | 9.32 | 9.38 | 9.68 | 9.82 | 9.25 | 9.64 |
| 85+ | 4.29 | 4.46 | 4.71 | 5.07 | 4.68 | 4.48 | 4.74 | 5.13 | 4.64 | 4.71 |

Data Source: Saskatchewan Health, Medical Services Branch.

## Average Number of Chiropractic Services

- Of Saskatchewan seniors who used chiropractic services in 1994/95, the average number of services used was 7.3 per year. This number remained fairly stable between 1994/95 to 2003/04.

**Average Number of Chiropractic Services Used by Seniors, 1994/95-2003/04**




Data Source: Saskatchewan Health, Medical Services Branch.

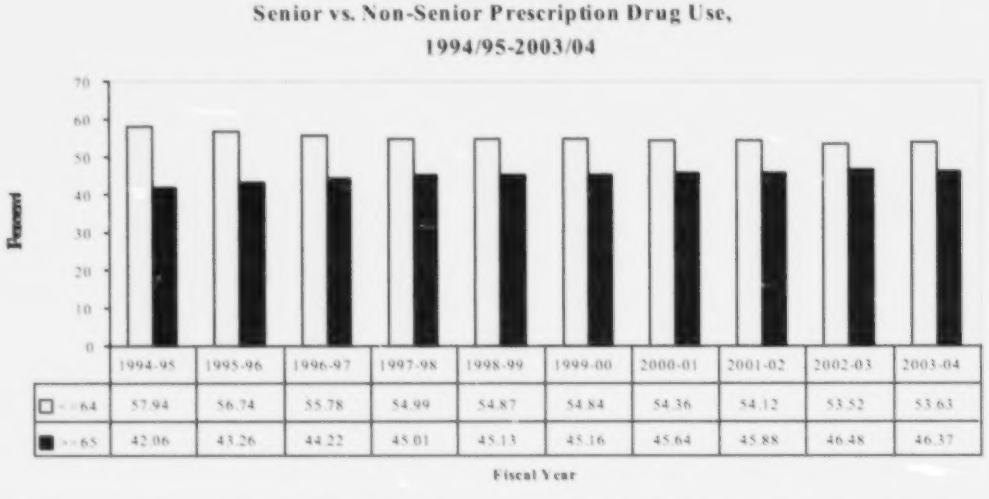
Saskatchewan Health collects information about prescriptions that a pharmacist fills to determine a Saskatchewan resident's eligibility for benefits and as a record of payment. During the timeframe of this study, this information included prescription drugs covered by the Saskatchewan Formulary only, dispensed to eligible Saskatchewan residents, with the exception of Registered Indians whose drug costs are covered by the federal government.

In 2004, the Drug Plan was enhanced to collect information on all prescriptions dispensed from community pharmacies, including those that were not previously collected under the Drug Plan. This was done to build a complete record of prescriptions to help health professionals make more informed drug therapy decisions.

Only those prescription drugs that were actually filled – and not all prescriptions written – are captured by this information. As well, whether a person took their medication as prescribed is not known.

## Prescription Drug Use by Seniors and Non-Seniors, 1994/95-2003/04

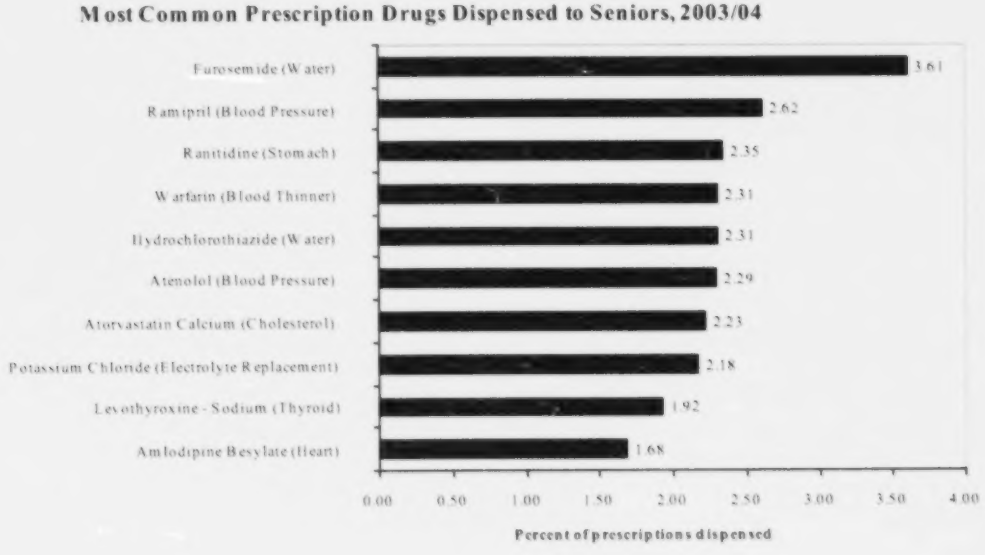
- Seniors filled 46.4 per cent of total prescriptions in 2003/04, compared to 53.6% for non-seniors. This pattern was fairly constant during the 11-year study period.




Data Source: Saskatchewan Health's Prescription Drug Plan Data, 1994/95-2003/04

## Most Common Prescription Drugs Dispensed to Seniors

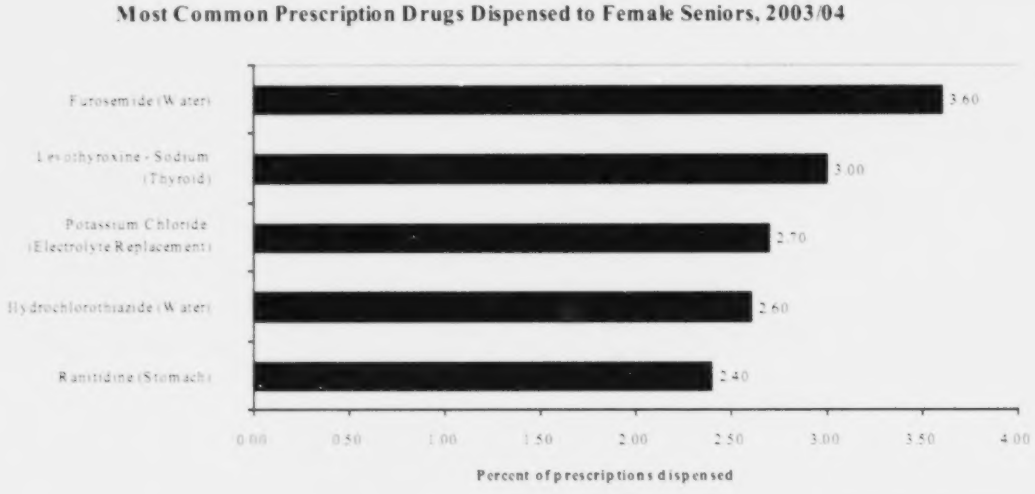
- Medications for high blood pressure, heart and stomach ailments were the three most commonly prescribed groups of drugs.
- The most frequently dispensed individual drug (3.6%) was furosemide (diuretic or water pill).




Data Source: Saskatchewan Health Prescription Drug Plan, 2003/04.
The prescription drugs dispensed less frequently than 1.68% are not shown in this chart.

## Most Common Prescription Drugs Dispensed to Female Seniors, 2003/04

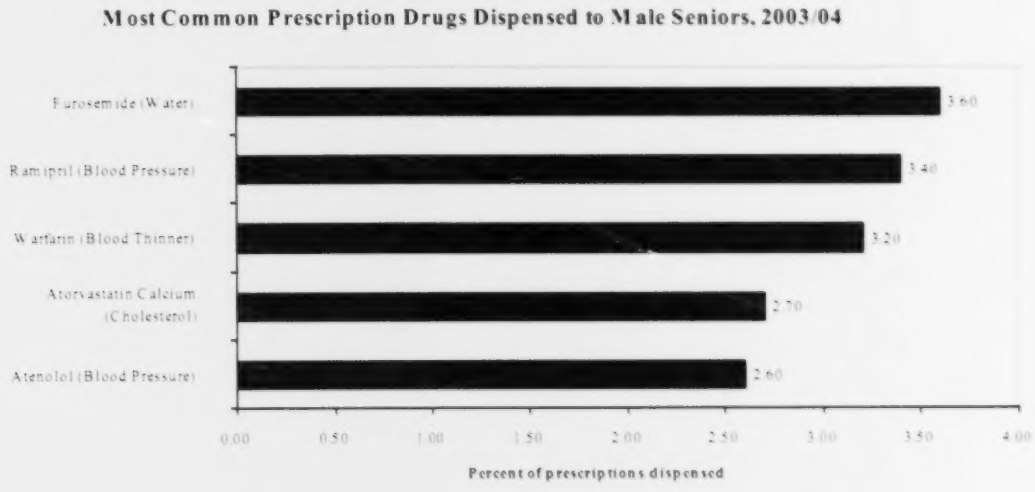
- The most common drugs dispensed to female seniors included water pills, thyroid medication and stomach pills.
- Over the past 10 years, 1993/94 to 2003/04, furosemide has been the top drug dispensed to female seniors.




Data Source: Saskatchewan Health Prescription Drug Plan, 2003/04.
The prescription drugs dispensed less frequently than 2.40% are not shown in this chart.

## Most Common Prescription Drugs Dispensed to Male Seniors, 2003/04

- The most common drugs dispensed to male seniors included high blood pressure, blood thinner, and cholesterol-lowering medications.
- Over the past 10 years, 1993/94 to 2003/04, furosemide has been the top drug dispensed to male seniors.

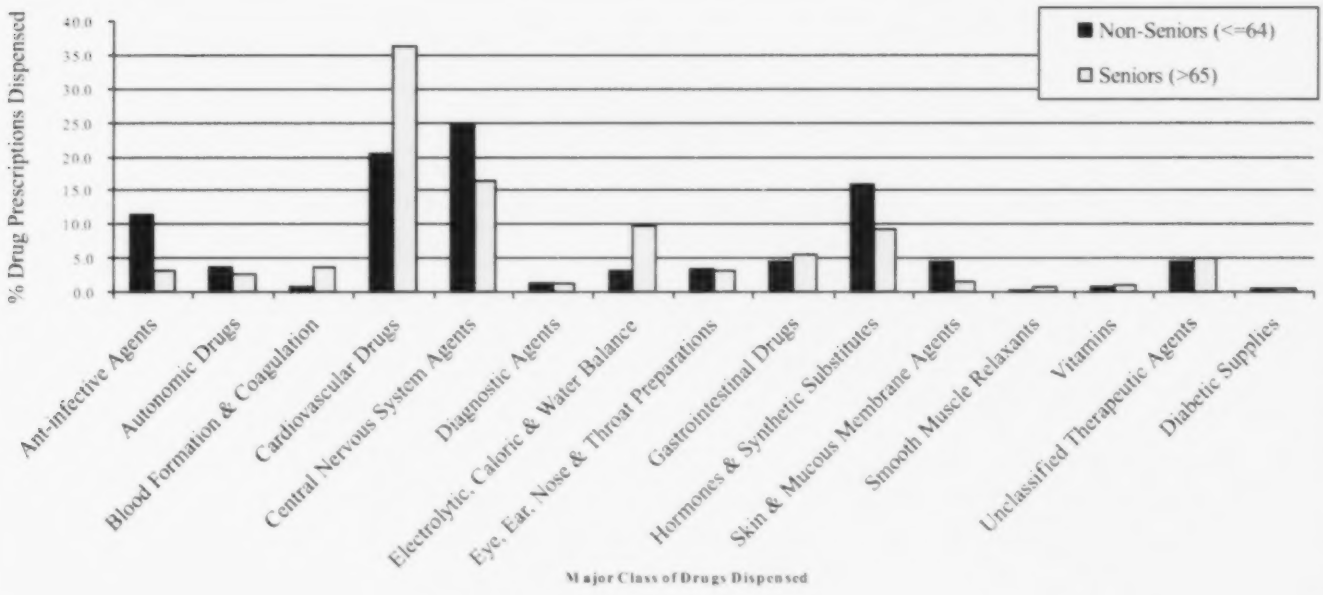



Data Source: Saskatchewan Health Prescription Drug Plan, 2003/04.
The prescription drugs dispensed less frequently than 2.6% are not shown in this chart.

## Prescription Drugs Dispensed to Seniors and Non-Seniors by Drug Class, 2003/04

- Cardiovascular drugs were the most dispensed drug class for seniors (36.2%), while central nervous system agents, such as antidepressants, were the most dispensed drug class for non-seniors (24.5%).
- The proportional use of several major prescription drug classes did not differ greatly between seniors and non-seniors.

**Major Class Prescription Drug Use among Seniors and Non-Seniors, 2003/04**

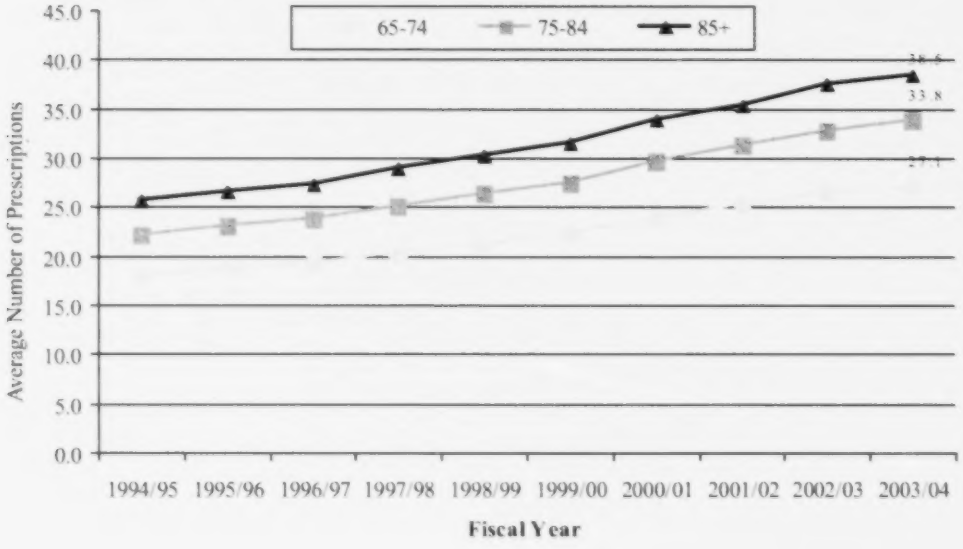



Data Source: Saskatchewan Health Prescription Drug Plan, 2003/04.
The drug classification shown in this chart is based on the American Hospital Formulary Service Pharmacologic-Therapeutic Classification.

## Average Annual Number of Prescriptions Dispensed per Senior by Age Group

- Seniors, on average, filled more prescriptions as they aged. On average in 2003/04, seniors aged 65 to 74 years filled 27.1 prescriptions, while seniors aged 75 to 84 years filled 33.8 prescriptions, and seniors aged 85 years and older filled 38.5 prescriptions.
- The average annual number of prescriptions dispensed per senior was calculated by dividing the total number of prescriptions dispensed in each age group by the total number of eligible Drug Plan beneficiaries in each age group of seniors who had at least one prescription filled each year.

**Average Annual Number of Prescriptions Dispensed to Seniors, 1994/95 - 2003/04**




Data Source: Saskatchewan Health Prescription Drug Plan, 1994/95-2003/04.

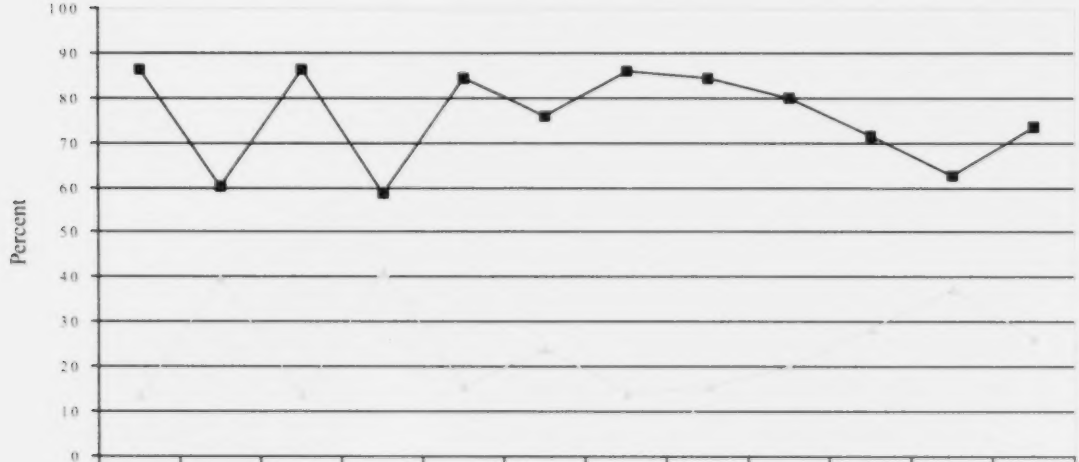
Saskatchewan Health's Home Care Program helps many seniors with health problems, who may need acute, palliative or supportive care, in order to live independently, longer, in the comfort of their homes. The program helps people maintain their quality of life and provides support for people who may otherwise have to be in hospital or long-term care facilities.

A long-term care facility provides institutional long-term care services to meet the needs of individuals usually having heavy care needs, that cannot appropriately be met in the community through home/community-based services. Long-term care homes may be referred to as nursing homes.

## Home Care - Seniors vs Non-Seniors

- In 2003/04, 35.8 per cent of seniors using home care were male and 64.2 per cent were female. Seniors used at least 70 per cent of home care services in 2003/04 in all health regions, with the exception of Five Hills (60.36 per cent), Regina Qu'Appelle (58.5 per cent) and northern Saskatchewan (62.6 per cent).
- Female seniors used considerably more home care services (64.2 per cent) than male seniors (35.8 per cent) in 2003/04.

**Seniors and Non-Seniors Use of Home Care (All Types), 2003/04**




| | Sun Country | Five Hills | Cypress | Regina Qu'Appelle | Sunrise | Saskatoon | Heartland | Kelsey Trail | Prince Albert Parkland | Prairie North | Northern SK* | SK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <=64 | 13.70 | 39.64 | 13.81 | 41.51 | 15.80 | 24.27 | 14.22 | 15.60 | 20.14 | 28.52 | 37.41 | 26.61 |
| >=65 | 86.30 | 60.36 | 86.19 | 58.49 | 84.20 | 75.73 | 85.78 | 84.40 | 79.86 | 71.48 | 62.59 | 73.39 |

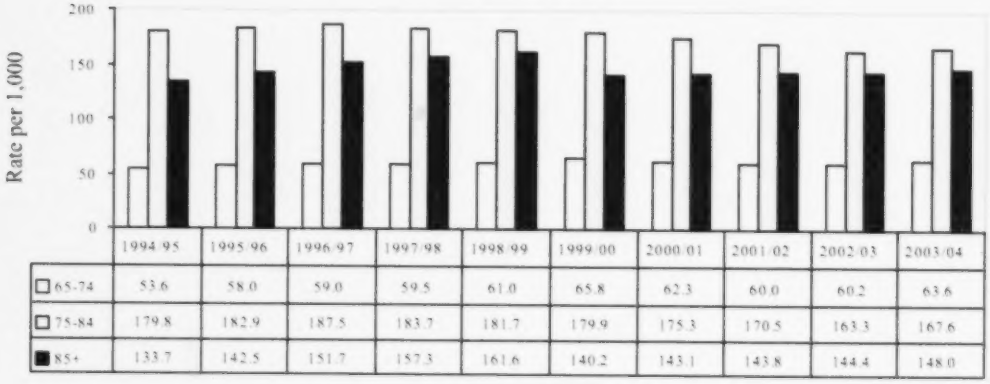
Health Regions

Data Source: Saskatchewan Health's Home Care System.

## Home Care Use Among Seniors by Age Group

- About 37.9 per cent of seniors use home care services in Saskatchewan.
- Seniors 75 to 84 years of age use home care more often than other seniors. Home care use by seniors aged 65 to 74 and for seniors aged 85 and older has increased over time from 1994/95, but has decreased for seniors aged 75 to 84.

**Home Care Use Among Seniors by Age Group (Rate per 1,000), 1994/95-2003/04**



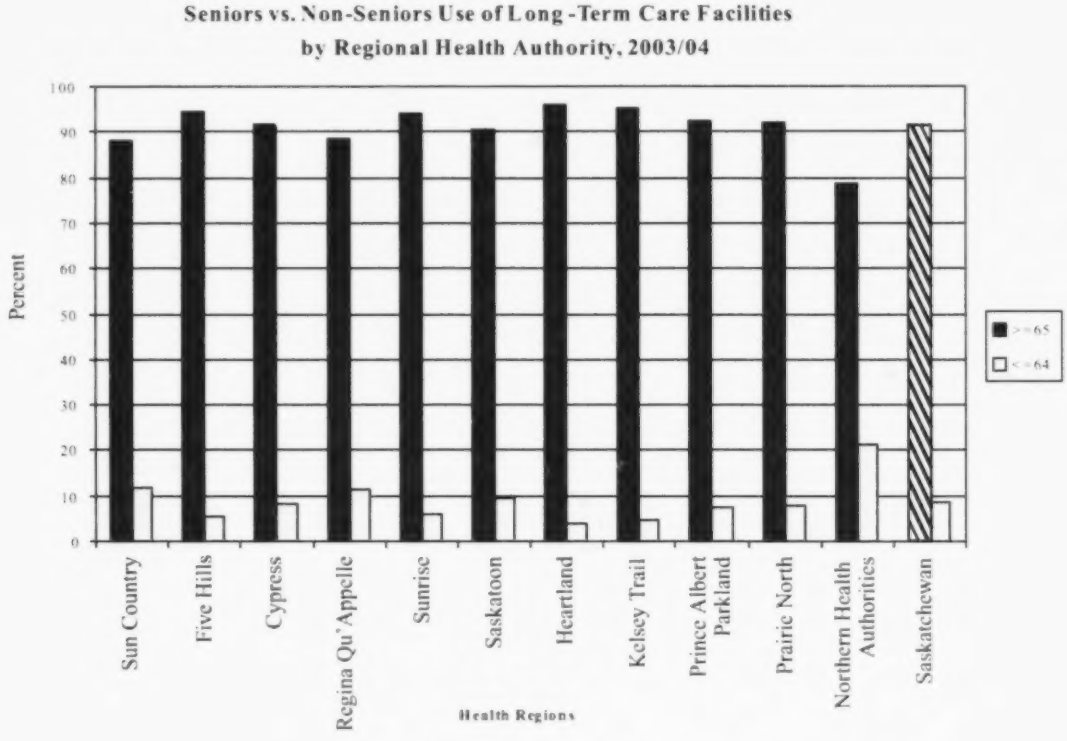

| | 1994/95 | 1995/96 | 1996/97 | 1997/98 | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 |
|---|---|---|---|---|---|---|---|---|---|---|
| 65-74 | 53.6 | 58.0 | 59.0 | 59.5 | 61.0 | 65.8 | 62.3 | 60.0 | 60.2 | 63.6 |
| 75-84 | 179.8 | 182.9 | 187.5 | 183.7 | 181.7 | 179.9 | 175.3 | 170.5 | 163.3 | 167.6 |
| 85+ | 133.7 | 142.5 | 151.7 | 157.3 | 161.6 | 140.2 | 143.1 | 143.8 | 144.4 | 148.0 |

Fiscal Year

Data Source: Saskatchewan Health's Home Care System.

## Long-Term Care – Seniors vs. Non-Seniors

- Seniors accounted for approximately 90 per cent of all long-term care residents in 2003/04. Northern Saskatchewan was the exception where seniors comprised 79 per cent of long-term care residents.
- Of these seniors, 65 per cent were female and 35 per cent were male (not shown in chart).

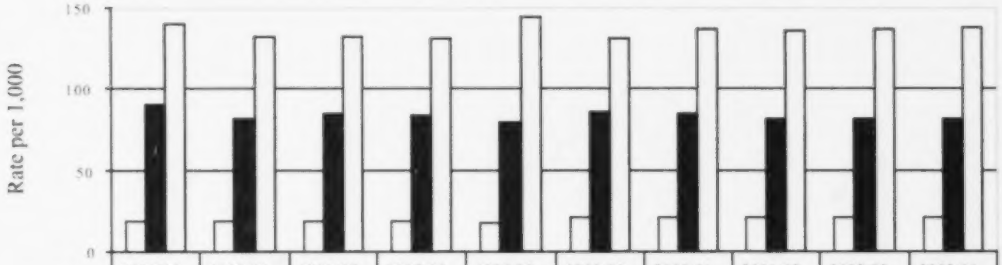



Data Source: Saskatchewan Health's Institutional Supportive Care Homes System.

## Long-Term Care Use Among Seniors by Age Group

- Seniors aged 85 and older were the largest consumer of long-term care services.
- Long-term care use has remained fairly stable over the study period, with one minor peak in 1998/99.

**Long-Term Care Use among Seniors by Age Group (Rate per 1,000)**




| | 1994/95 | 1995/96 | 1996/97 | 1997/98 | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 |
|---|---|---|---|---|---|---|---|---|---|---|
| 65-74 | 19.2 | 18.3 | 18.4 | 18.6 | 18.2 | 20.8 | 20.6 | 20.5 | 20.8 | 21.4 |
| 75-84 | 90.7 | 82.1 | 84.9 | 83.7 | 79.8 | 85.6 | 85.0 | 81.3 | 81.7 | 81.2 |
| 85+ | 140.1 | 132.5 | 132.7 | 130.9 | 144.6 | 131.3 | 136.6 | 135.3 | 136.6 | 138.2 |

Fiscal Year

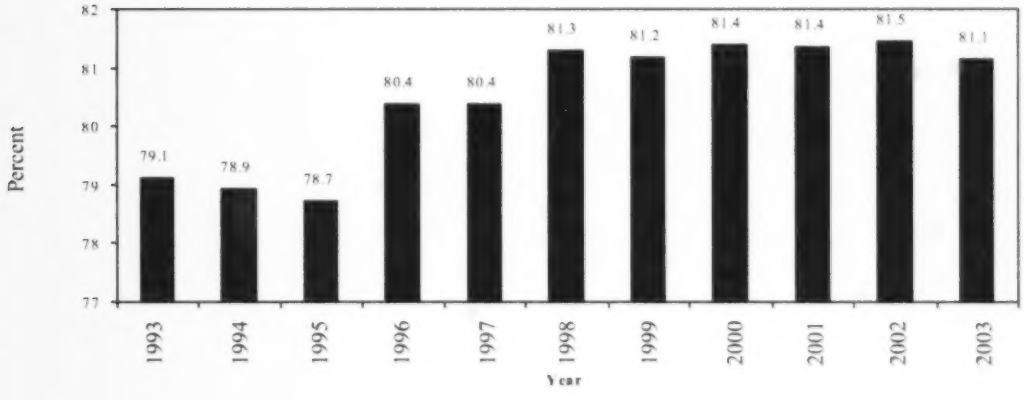
Data Source: Saskatchewan Health's Institutional Supportive Care Homes System.

The proportion of seniors in Saskatchewan and Canada continues to grow. With this in mind, it is expected that their proportion in total deaths would also increase. This section presents the proportion of seniors' deaths compared to total deaths in Saskatchewan, as well as the major causes of deaths by sex and age groups.

## Senior Deaths as a Proportion of Total Deaths

- The majority of deaths in Saskatchewan occur to people aged 65 years and older.
- Seniors accounted for 81.1 per cent of all deaths in the province in 2003 while only constituting 14.6% of the population. This represents an increase of two per cent from 79.1 per cent in 1993.

**Proportion of Total Saskatchewan Deaths in Seniors, 1993-2003**

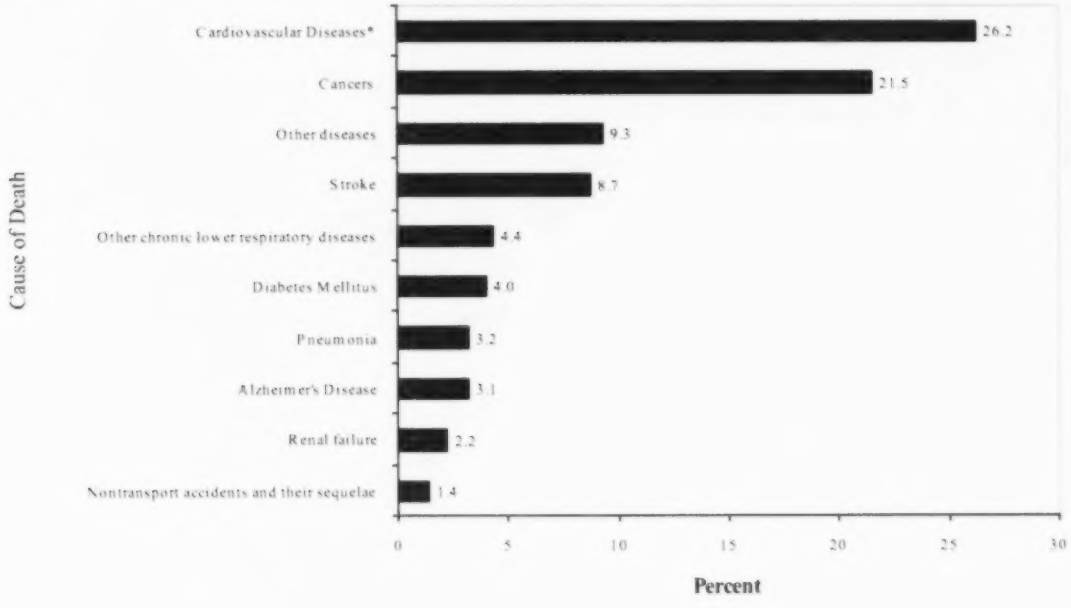



Data Source: Saskatchewan Health, Health Registration and Vital Statistics Branch.

## Major Causes of Death

- Cardiovascular disease was the leading cause of death (26.2%) for Saskatchewan seniors in 2003.
- Cancer was the second major cause of death (21.5%) for Saskatchewan seniors.
- Each of the other major causes of death, including stroke, diabetes and respiratory diseases had frequencies of less than 10 per cent of deaths among seniors.

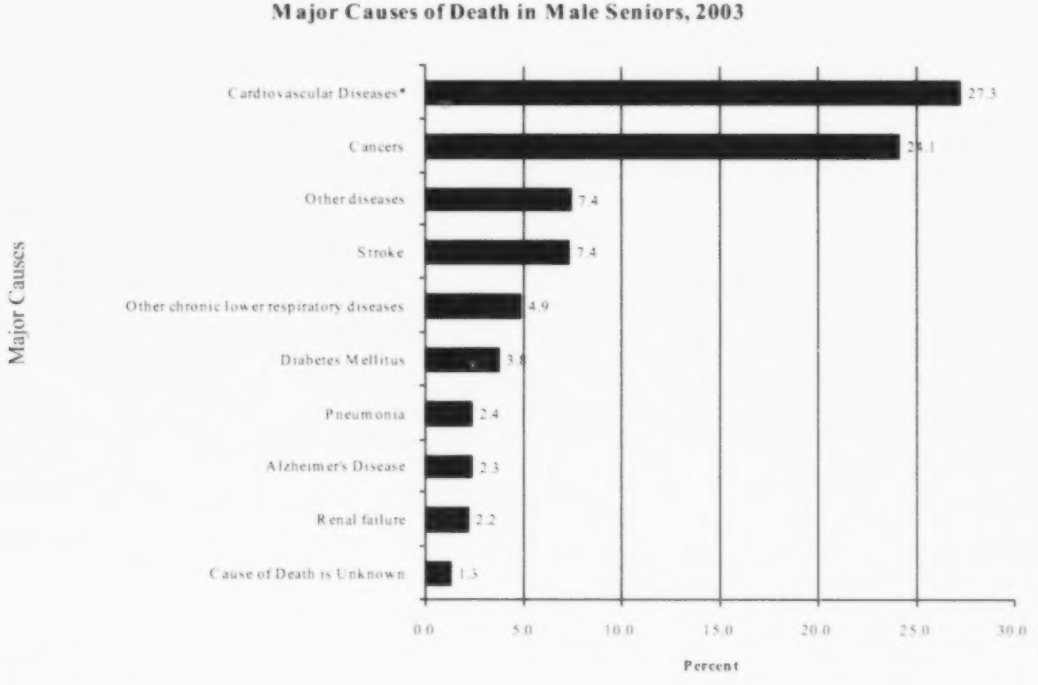
**Major Causes of Death in Seniors, 2003**




Data Source: Saskatchewan Health, Health Registration and Vital Statistics Branch.
* Cardiovascular disease include chronic ischemic heart disease, acute myocardial infarction and other forms of heart disease.
Individual causes responsible for less than 1.4% deaths are not shown in this chart.

## Major Causes of Death – Male Seniors

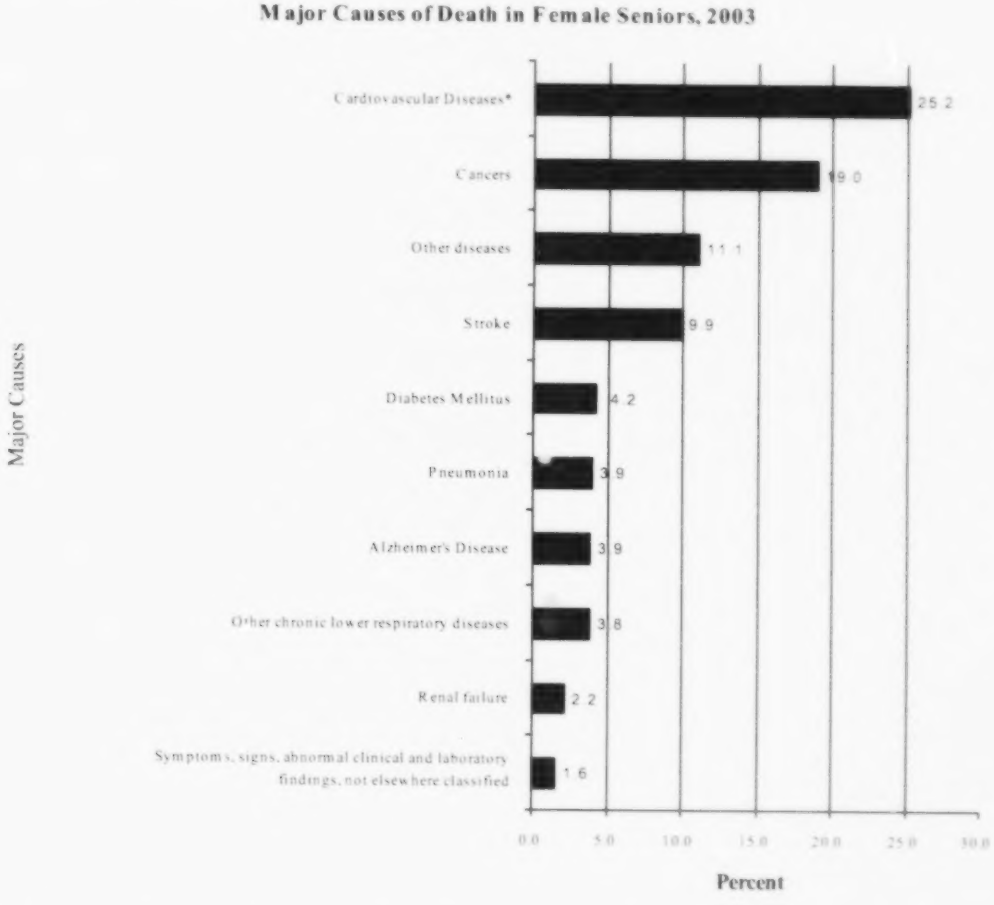
- Cardiovascular disease was the cause of 27.3 per cent of deaths in male seniors in 2003. This was followed by cancer, which caused 24.1 per cent of deaths.
- Each of the other major causes of death among male seniors, including stroke, diabetes and respiratory disease had a frequency of less than 10 per cent of deaths among male seniors.




Data Source: Saskatchewan Health, Health Registration and Vital Statistics Branch.
* Cardiovascular diseases include chronic ischemic heart disease, acute myocardial infarction and other forms of heart disease.
Individual causes responsible for less than 1.3% deaths are not shown in this chart.

## Major Causes of Death – Female Seniors

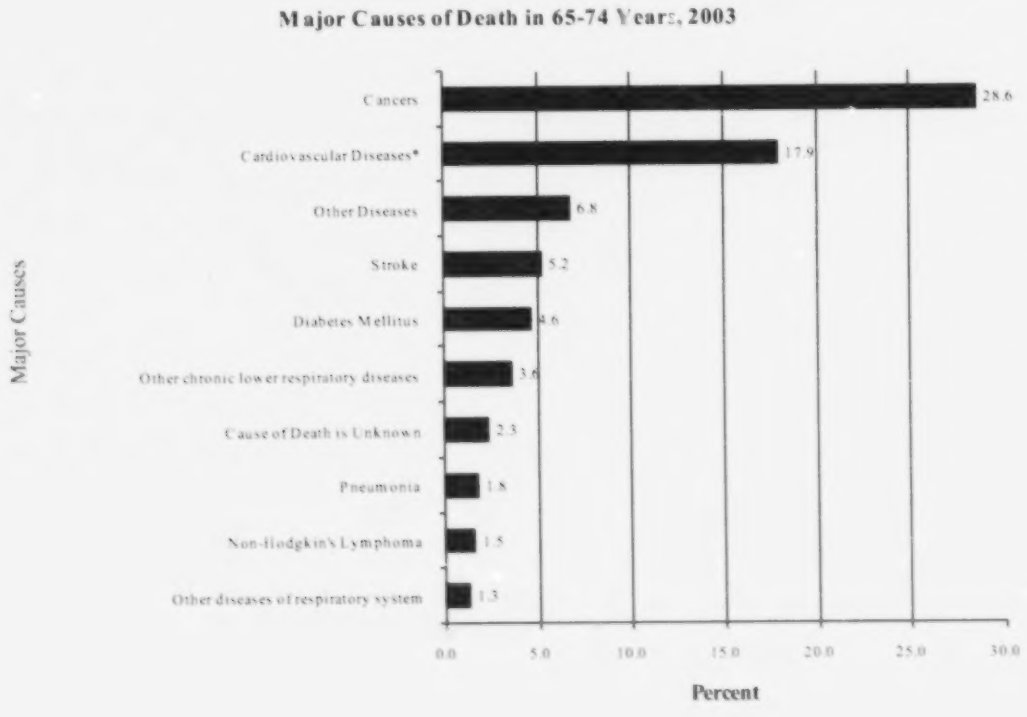
- Cardiovascular disease was the leading cause of death (25.2 per cent) in female seniors in 2003. This was followed by cancer, which caused 19 per cent of deaths.
- Each of the other major causes of death, including stroke, diabetes and respiratory disease, had a frequency of less than 11.1 per cent of deaths among female seniors.




Data Source: Saskatchewan Health, Health Registration and Vital Statistics Branch.
* Cardiovascular diseases include chronic ischemic heart disease, acute myocardial infarction and other forms of heart disease.
Individual causes responsible for less than 1.6% deaths are not shown in this chart.

## Major Causes of Death – Seniors 65 to 74 Years of Age

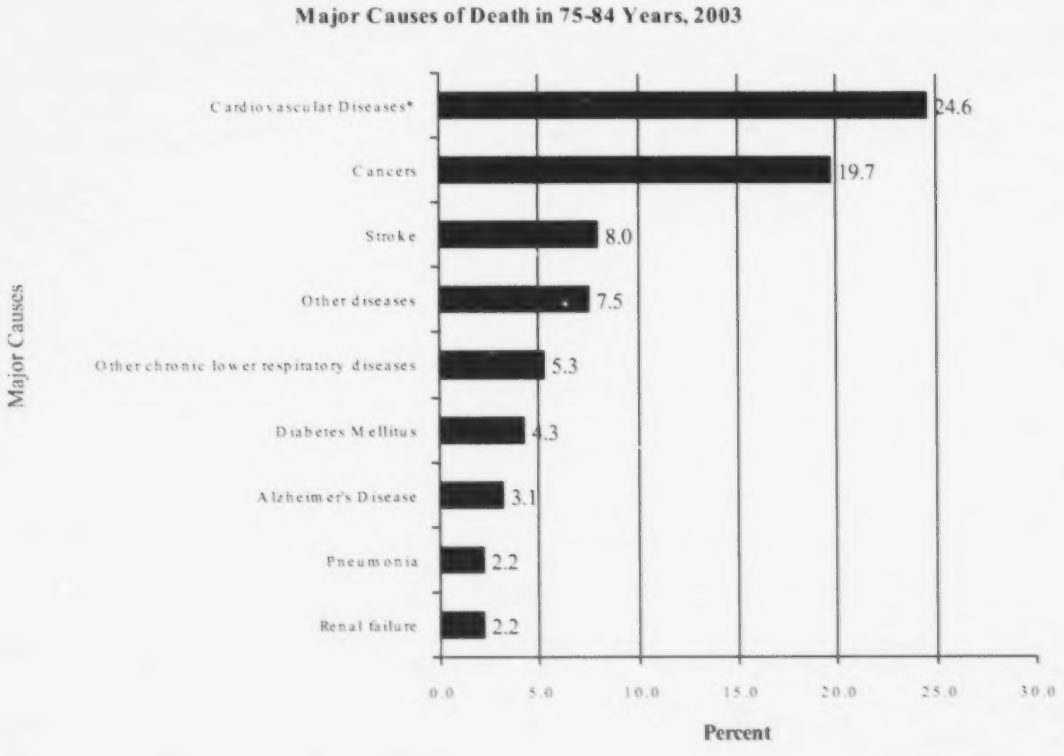
- Cancer was the leading cause of death for seniors 65 to 74 years of age (28.6%), followed by cardiovascular disease (17.9%) and pneumonia (6.8%) in 2003.
- Alzheimer's disease did not appear to be a major cause of death in this younger age group, although it is a major cause of death in seniors aged 75 and older.




Data Source: Saskatchewan Health, Health Registration and Vital Statistics Branch.
* Cardiovascular diseases include chronic ischemic heart disease, acute myocardial infarction and other forms of heart disease.
Individual causes responsible for less than 1.3% deaths are not shown in this chart.

## Major Causes of Death – Seniors 75 to 84 Years of Age

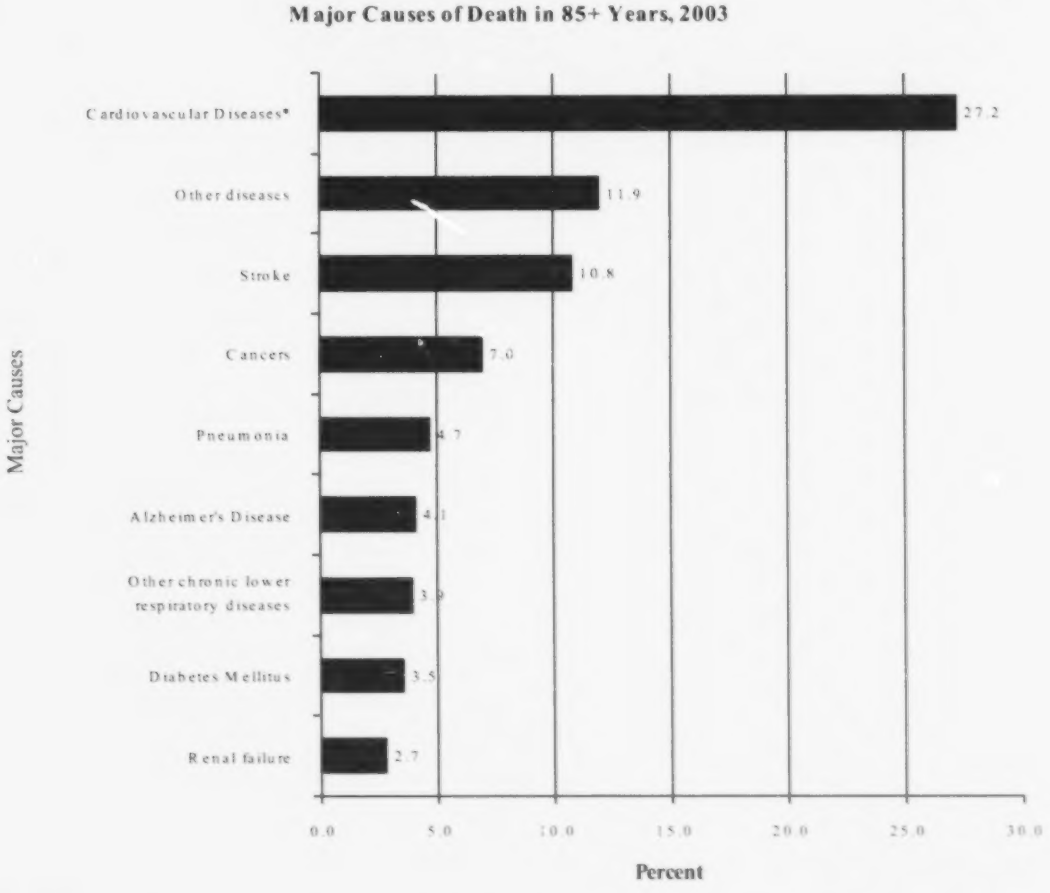
- Cardiovascular disease was the leading cause of death for seniors 75 to 84 years of age (24.6%), followed by cancer (19.7%) and stroke (8.0%) in 2003.




Data Source: Saskatchewan Health, Health Registration and Vital Statistics Branch.
* Cardiovascular diseases include chronic ischemic heart disease, acute myocardial infarction and other forms of heart disease.
Individual causes responsible for less than 2.2% deaths are not shown in this chart.

## Major Causes of Death – Seniors 85 Years of Age and Older

- Cardiovascular disease was the leading cause of death for seniors 85 years of age and older (27.2%), followed by "other diseases" (11.9%) and stroke (10.8%) in 2003.




Data Source: Saskatchewan Health, Health Registration and Vital Statistics Branch.
* Cardiovascular diseases include chronic ischemic heart disease, acute myocardial infarction and other forms of heart disease.
Individual causes responsible for less than 2.7% deaths are not shown in this chart.

## Estimated Health Care Expenditures

- Nearly half of every health care dollar is devoted to seniors' health care services, not surprising considering that we tend to experience more chronic or acute conditions as we age. In 1997/98, about 47 cents of every health care dollar directly benefited seniors. By 2002/03, this number increased to 48 cents.
- Per capita health expenditures for seniors increased from 1997/98 to 2002/03. In 1997/98, approximately $5,000 was devoted to health care services for each senior. By 2002/03, this number increased to $7,500.
- A larger proportion of some health services benefit seniors more than non-seniors. For instance, seniors accounted for more than 90 per cent of long-term care and nearly half of prescription drug expenditures. On the other hand, a larger proportion of non-seniors were hospitalized compared to seniors.
- A summary of major health care expenditures for seniors, compared to the total population, is presented in the table below. Some areas are not included, such as alcohol and drug services, problem gambling services, other health services, support and administration.

**Estimated Expenditures for Seniors by Major Health Care Categories, 1997/98 and 2002/03**

| | 1997/98 | | 2002/03 | |
|---|---|---|---|---|
| Health Service Covered | Expenditure – Total | Expenditure – Seniors | Expenditure – Total | Expenditure – Seniors |
| Acute Care | $558,313,902 | $283,140,337 (51%) | $966,287,036 | $470,477,526 (49%) |
| Home Care | $66,705,000 | $54,455,936 (82%) | $96,539,000 | $75,554,436 (78%) |
| Mental Health | $68,545,799 | $8,836,817 (13%) | $67,712,688 | $9,871,049 (15%) |
| Long-Term Care | $257,398,000 | $239,697,873 (93%) | $343,074,000 | $318,717,451 (93%) |
| Physician Services | $315,766,000 | $99,312,254 (32%) | $452,816,954 | $149,909,217 (33%) |
| Chiropractic Services | $8,026,400 | $1,288,778 (16%) | $9,268,624 | $1,263,351 (14%) |
| Optometric Services | $3,212,900 | $131,153 (4%) | $4,077,111 | $137,547 (3%) |
| Dental Services | $1,259,000 | $128,075 (10%) | $1,289,078 | $139,856 (11%) |
| Prescription Drug Plan * | $65,199,190 | $ 31,563,608 (48%) | $132,274,231 | $63,204,339 (48%) |

Data source: Saskatchewan Health Estimated Expenditures on Seniors for the period April 1, 1997-March 31, 1998 and April 1, 2002-March 31, 2003. Information Products Group, Health Information Solutions Centre, Saskatchewan Health.

* Only the portion of prescription drug costs covered by the Drug Plan.

## High-End Drug Costs

- The tables below show prescription drug costs divided into percentiles representing the total number of seniors in the Prescription Drug Plan database. The first percentile represents three quarters (1-75th) of the seniors population. The remaining top quarter population is further divided into 76-90th, 91-95th and 96-100th percentiles.
- The top two percentiles (10% of the seniors population) comprised approximately 38.1 per cent of total drug costs in 1994/95 and 35.1 per cent in 2003/04.

**Percentiles breakdown of total prescription drug costs for seniors in 1994/95**

| Percentiles | Number of Seniors in Drug Plan | Total Cost for Seniors* | Per capita costs* | Percent of Total Cost |
|---|---|---|---|---|
| 1-75th | 87,416 | $ 21,898,353 | $250.5 | 34.7 |
| 76-90th | 17,483 | $ 17,133,094 | $980.0 | 27.2 |
| 91-95th | 5,828 | $ 8,877,899 | $1,523.3 | 14.1 |
| 96-100th | 5,828 | $ 15,140,277 | $2,597.8 | 24.0 |
| **Total** | **116,555** | **$ 63,049,624** | **$540.9** | |

**Percentiles breakdown of prescription drug costs for seniors in 2003/04**

| Percentiles | Number of Seniors in Drug Plan | Total Cost for Seniors* | Per capita costs* | Percent of Total Cost |
|---|---|---|---|---|
| 1-75th | 95,212 | $ 54,388,938 | $ 571.2 | 38.7 |
| 76-90th | 19,043 | $ 36,766,835 | $ 1,930.7 | 26.2 |
| 91-95th | 6,348 | $ 18,078,913 | $ 2,848.0 | 12.9 |
| 96-100th | 6,347 | $ 31,198,799 | $ 4,915.5 | 22.2 |
| **Total** | **126,950** | **$ 140,433,485** | **$1,106.2** | |

* Total costs for seniors include the drug costs covered under the Drug Plan as well as the co-payment portion paid by the seniors.

# CONCLUSIONS

Saskatchewan has a slightly increasing trend in the proportion of seniors in the province's population over time, indicating that its population is increasingly aging. The seniors' population varies considerably across Health Regions, with Sunrise and Heartland ranking first and second highest. In terms of health determinants, income and education have shown trends of progressive improvement over the period of more than two decades (1980-2002). The majority of seniors have responded positively in their self-rated health status. Seniors have recorded a number of healthy living behaviours such as quitting smoking, participating in physical activity and consuming fruits and vegetables. Yet, seniors commanded a higher share in health care costs comprising nearly half of every health care dollar spent. Seniors account for over four-fifths of total deaths in the province, while cardiovascular diseases and cancers are their top two causes of death, which should draw the focus of attention in the health care system.

Considering that the health care needs of seniors are the cumulative effects of their past lifestyle, efforts of intervention and mitigation measures should be targeted right from youth with appropriate education on positive lifestyle and risk-free behaviours.

This report is the outcome of a series of analyses of data derived from the various secondary sources described below. None of the databases used was linked to each other with exception of analysis for diabetes prevalence.

## Canadian Community Health Survey

The Canadian Community Health Survey (CCHS), a biennial health survey, is conducted by Statistics Canada to provide timely, reliable, cross-sectional estimates of health determinants, health status and health system utilization across Canada. The survey gathers data at the sub-provincial levels of geography. It creates a flexible survey instrument that meets specific health region data groups, develops focused survey content for key data, and deals with emerging health care issues as they arise. The actual survey questions and data generated from the 2003 survey were utilized in the present study.

## National Diabetes Surveillance System

The National Diabetes Surveillance System (NDSS) launched in 1999 was designed to provide accurate baseline surveillance data on rates of new and prevalent cases of diabetes and its serious complications, and to identify high-risk groups/areas. It was also designed to flag indicators and benchmarks of change such as reductions in new cases of diabetes and improvements in quality of care and health outcomes for people with diabetes. In the present study, data sources for the diabetes numerator were the Person Registry System (PRS), hospital separation and physician services databases. The SAS software codes developed for the NDSS were used to link these three sets of databases. The data file included hospital separation information and physician services information for each senior in Saskatchewan with a valid health services number (HSN).

## Saskatchewan Hospital Separation Data

Saskatchewan Health maintains a database of all hospital separations and day surgeries in the province. Diagnoses and procedures are coded at the hospital level, and are processed by Canadian Institute of Health Information (CIHI). All provincial data are sent back to Saskatchewan Health from CIHI. In the present study, the hospital database was utilized to describe the top causes of hospitalizations for seniors, and the burden on hospitals in terms of the number of hospital separations and the cost (in dollars) it represented.

## Saskatchewan Physician Services Data

In Saskatchewan, all members of the Covered Population are eligible to receive physician services as insured benefits. Most physicians are reimbursed on a fee-for-service basis. Diagnostic data are furnished only to support the claim for payment and because only one three-digit ICD-9 code is entered per visit. A number of physicians have alternative payment arrangements (e.g. salary, contract), and submit records of their services as shadow or dummy claims. As a result, not all services provided including those to seniors in such arrangements might be captured consistently.

## Saskatchewan Chiropractic Data

Saskatchewan Health Medical Services Plan (MSP) provides insurance for chiropractic visit and x-ray services with no limits. Chiropractic services are insured through a co-payment system whereby the MSP makes payment to chiropractors for each service provided. Chiropractors are also allowed to charge beneficiaries an additional amount beyond the amount of government payment. Supplementary Health Program beneficiaries, recipients of Family Health Benefits Program, and seniors (age 65+) receiving a Saskatchewan Income Plan supplement are fully insured for chiropractic services. The Chiropractor Billing Data used in this study encompass all Medical Services Plan and Supplementary Health Program services processed for seniors through the Medical Services Branch Claims System.

## Saskatchewan Prescription Drug Data

All Saskatchewan residents with valid Saskatchewan Health coverage unless coverage is provided by another federal or provincial government or non-government agency are eligible for Drug Plan benefits. This excludes beneficiaries eligible under the First Nations and Inuit Health Branch of Health Canada, Department of Veteran Affairs, Royal Canadian Mounted Police, Canadian Forces, Workers' Compensation, and inmates of a federal penitentiary. The numbers in this study could vary slightly from the Saskatchewan Drug Plan's Annual Reports due to claim adjustments over time.

Drugs covered by the Drug Plan are listed in the Saskatchewan Formulary. The Drug Plan's cost-sharing structure has undergone changes over time. It currently operates on an income-based support program.

## Saskatchewan Health's Home Care System

Saskatchewan Health provides funding to regional health authorities that covers most of the costs of delivering home care services. The following home care services are free of charge for all Saskatchewan residents who have been assessed as needing the following categories of services and who hold Saskatchewan Health coverage: case management and assessment, home nursing, and physical and occupational therapy services.

A fee is charged to recover part of the cost of providing the following home care services, except in situations where an individual has been assessed as end-stage palliative: homemaking (including personal care, respite and home management services), meals, and home maintenance.

Home care services that are not provided or funded by the regional health authorities, such as services received from private homemaking and private home nursing agencies, are not covered, and therefore, not captured on the home care data.

## Saskatchewan Health's Institutional Supportive Care Homes System

Saskatchewan Health provides funding to regional health authorities that covers a major portion of the costs for long-term care and respite care in special-care homes (nursing homes), health centres, and hospitals.

Individuals assessed as having light care needs, who are admitted to long-term care facilities, must pay the full cost of services. Stays in personal care homes (residential facilities which provide adults with accommodation, meals and help with personal care) are not covered.

## Influenza Data

The numbers of flu shots analyzed in this study came from the RHAs, and include only the accounts for those provided for free by RHAs to "at risk" individuals. The number of "lab confirmed" flu cases came from the Provincial Laboratory.

## Covered Population

Covered Population refers to all residents of Saskatchewan who are eligible beneficiaries on Saskatchewan's Person Registry System (PRS) as of June 30 of the given year. The Covered Population of Saskatchewan excludes those persons who are wholly covered by the federal government (Canadian Armed Forces, RCMP, and inmates of federal prisons) and those persons who are not yet residents in the province for three months; this totals about 1 per cent of Saskatchewan's population.

## Estimated Health Care Expenditures

**Expenditures** are taken from the Saskatchewan Health 2002/03 Annual Report, except where noted. Dollar amounts are calculated by multiplying the percentage of weighted services by the total fiscal year expenditure for that service.

**Acute Care** includes all hospital visits for residents covered by Saskatchewan Health insurance, whether or not the procedure occurred in or out of province. It includes in-patient and day surgeries, as well as rehabilitation services. For in-province cases, in-/day-patient units are calculated based on total weighted cases for acute care (level 6) in-patient and day surgery hospitalizations. Weighted cases include the sum of the resource intensity weightings (RIW) and day procedure groups (DPG) weights assigned by the Canadian Institute for Health Information (CIHI), based on diagnoses and procedures performed in the hospital. The weightings are used in the estimation of costs associated with a given hospitalization. Hospitalizations with primary procedures or diagnoses of cardiac catheterization, dialysis, radiation therapy, mental health, nuclear medicine, CAT scans, or length of stay greater than one year were excluded because they are not funded through the acute care funding pool. For out-of-province cases, hospital payments are based on hospital/reciprocal billing costs. Rehabilitation services were weighted units based on days in institutional care that were adjusted for cost.

**Long-Term Care** weighted units based on days in care, using level 4 days for Registered Indians (other levels are covered by Indian and Northern Affairs Canada) and level 3 and 4 days for all other long-term care residents, adjusted for cost (level 3 = 0.7308, level 4 = 1.0000). Cost adjustments obtained from Saskatchewan Health's Acute and Emergency Services Branch, 1998-99 Population Needs-Based Resource Allocation Model for Institutional Supportive Care Services.

**Physician Fee-For-Service** estimated in- and out-of-province expenditures paid by Medical Services Plan. **Physician Non-Fee-For-Service** expenditures were paid by the Department to support physician services, some of which may not be directly client-related. Fee-for-service rates have been used to estimate expenditures.

**Chiropractic Services** estimated in- and out-of-province expenditures paid by Medical Services Plan and Supplementary Health.

**Home-Based Services** weighted units based on number of home care units of service provided, adjusted for cost (meals=1.0000, homemaking=4.4372, nursing=9.7127). Physiotherapy units are included with nursing units; home maintenance units, with homemaking units. Cost adjustments obtained from Saskatchewan Health's Acute and Emergency Services Branch 1998-99 Population Needs-Based Resource Allocation Model for Home-Based Services.

**Saskatchewan Health's Prescription Drug Plan** costs include only the costs of prescription drugs covered by the Drug Plan, but not the co-payment portion paid by the seniors. The cost data excludes First Nations residents and those covered federally (such as RCMP and Department of Veteran Affairs).

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